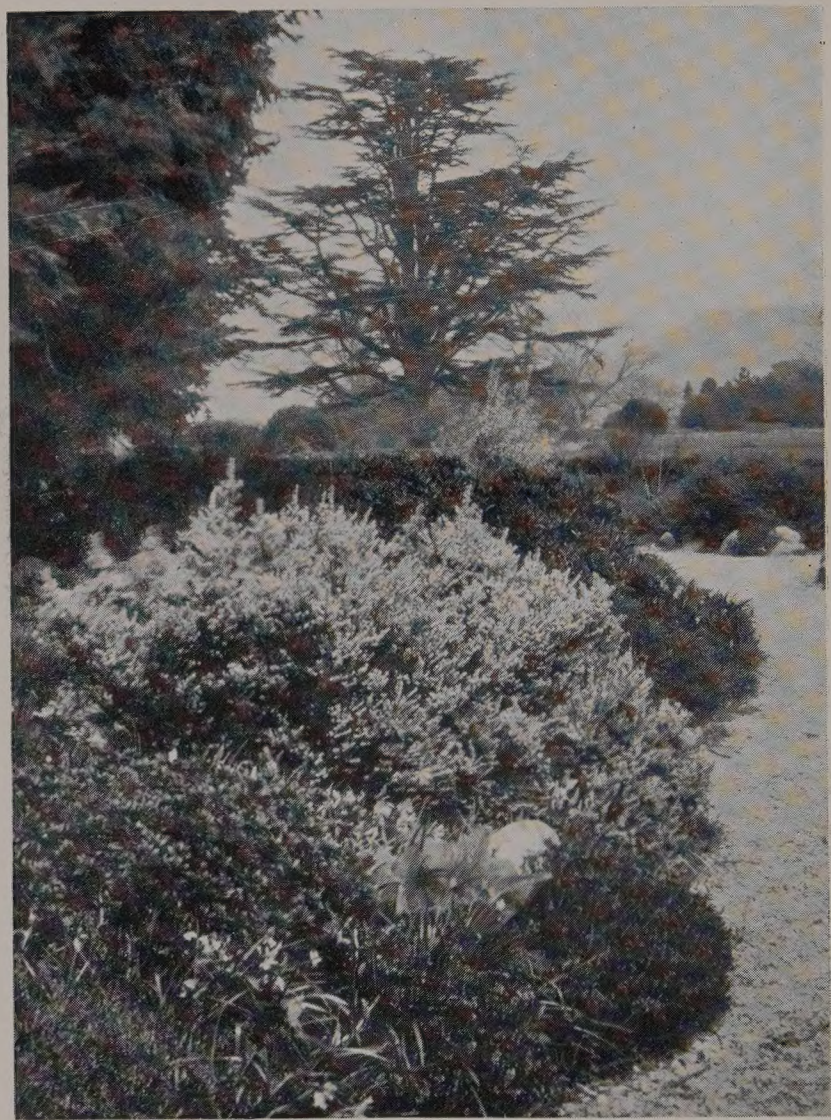




THE HARDY HEATHS

AND SOME OF THEIR NEARER ALLIES



ERICA MEDITERRANEA VAR. SUPERBA, AND GENISTA HISPANICA

THE GARDENERS' CHRONICLE HANDBOOKS
EDITED BY CHARLES H. CURTIS, F.L.S.

MANAGING EDITOR OF "THE GARDENERS' CHRONICLE"

THE
HARDY HEATHS
AND SOME OF THEIR NEARER ALLIES

BY

A. T. JOHNSON

Author of

"A GARDEN IN WALES," ETC.

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THE HARDY HEATHS AND SOME OF THEIR NEARER ALLIES

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Author of 'The Hardy Heaths of the
South of England' &c.

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PREFACE

IN writing this little book I have been influenced by a deep personal regard for the Heaths, as these shrubs have always occupied a prominent place among the most esteemed of my garden friends, and throughout the twenty-five years during which I have been cultivating them the keen desire to further their interests and enhance their popularity as garden subjects has never waned. Nor would it be any less truthful to state that during that period I have never once lost faith in the manifold good qualities of Heaths and the unfailing encouragement they afford.

If an affection for Heaths were a personal fancy of my own the matter might assume a different aspect, but the fact is that although there is an enormous public whose admiration for these subjects is undeniable, these good folk do not grow them so widely as one might expect them to do. In the following chapters I have endeavoured not so much to extol the manifest beauties of the Heaths as to present certain facts regarding them, in the hope that with a fuller realisation of these the cultivation of Heaths will be taken up with less restraint and more enthusiasm.

In this effort I have been encouraged by the conviction that if Heaths are not, and never have been, so popular as their peculiar fascination and

usefulness so fully deserve, there are at the present time unmistakable indications that the gardening public is awakening to their singular charms. Indeed, the many unrivalled attractions of the Heaths are being recognised by such a steadily increasing number of gardeners that one may look forward to seeing these subjects enjoying, in the near future, the full measure of that appreciation which is their due.

If professional gardeners and those of a botanical turn of mind discover little that is new to them in these pages, they must allow me to hope there are not a few novices who will find my efforts instructive and encouraging. This is a volume expressly for amateurs, and while I have avoided entering into botanical details and adopted the simplest terms available, it is hoped that the information given will not be any the less accurate and helpful.

A. T. J.

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THE HARDY HEATHS

CHAPTER I

HABITS AND DISTRIBUTION

THE genus *Erica*, to which the Heaths belong, is a very large one, yet the species are curiously restricted in their geographical range, and the great majority of them are too tender for out-door culture in this country. These latter are natives of the Cape of Good Hope, and certain of them are familiar objects in greenhouses. The remainder are almost entirely confined to European soil, and it is these which are generally included under the term "hardy Heaths." Of these species, an even dozen, five are natives of Great Britain, the Scotch Heather, or Ling, now being placed in a separate genus as *Calluna vulgaris*.

The hardy Heaths range from little shrubs of a few inches in height to the giant of the family, the Tree Heath (*Erica arborea*), which attains the stature of a small tree of fifteen to twenty feet. All of them are evergreen, the leaves being linear or narrow, and usually arranged in closely set whorls of from three to five or more. Regarding the flowers it will be sufficient to state that the most distinguishing feature of the true *Ericas* is the form of the corolla, which is oval, cylindrical, or urn-shaped, with a more or less contracted mouth,

which has, as a rule, four tiny teeth at the rim. It is this corolla which is the brightly coloured, most conspicuous part of the blossom, but in several species the stigma and stamens which protrude, and which are gaily tinted, have no little effect in the colour scheme. The corolla is clasped at its base by a four-parted calyx, which also is very frequently other than the customary green. When the flowers of the Heaths are over they do not fall in the usual way but fade into various shades of brown and remain clinging to the seed-capsules for many months, often for a year or more. This, which I shall refer to later, and which in most plants would be regarded as unsightly, is in many of the Heaths a feature of much beauty, especially in winter.

Since *Calluna vulgaris* is still regarded as an *Erica* by many people it will be useful in passing to point out how it differs from the foregoing. A glance at the blossom of almost any variety of this Heather will disclose the fact that it is the calyx and not the corolla which is coloured, and it is the most conspicuous part of the flower. The true corolla, which is much like that of the *Ericas* in shape, is only about half as long as the calyx, and it is hidden within the four sepals, which entirely overlap it. Again, in the foliage of this Heather the rather flattened leaves appear in four closely arranged rows, which give the twig that bears them the four-sided appearance common in some dwarf *Veronicas*. There are other botanical differences between *Calluna* and *Erica*, but into these one need not go here. To the Irish Heath (*Daboecia poli-*

folia) and a few other allied races of this interesting family some reference will be made at the end of the book.

NATURAL DISTRIBUTION

All the hardy Heaths are lovers of the sun and the open air. Indeed, the very word "Heath" (Anglo-Saxon, *hoeth*) is a name they have borrowed from those wide and breezy expanses of almost treeless land where they most abound. Our own natives cover vast areas of such land, and so indifferent as to soil (so long as it is lime-free) are the commoner kinds, such as the Bell Heather (*Erica cinerea*), the Cross-leaved Heath (*E. Tetralix*), and the Ling, or Scotch Heather, that all may often be found growing together at any altitude from sea-level to moorlands of about two thousand feet. But, generally speaking, *E. cinerea* favours drier, rocky slopes, and *E. Tetralix* the wetter peat-land, while the Ling of the grouse moor enjoys intermediate conditions. But they are, as I have suggested, as adaptable to soils as they are to climate. Ling, for example, which flourishes in the cool, peaty soil of misty, northern moors, will be found growing in the hottest, driest, and most arid hill-slopes of Southern France. It has even made itself at home on the American Continent, which has no Heaths of its own. In Nova Scotia the patriotic Scotsmen who introduced their cherished Ling to that country years ago may now congratulate themselves on seeing it thoroughly naturalised. In Massachusetts, it is, according to a *Bulletin* issued by the Arnold

Arboretum, firmly established, and on several New England estates Heather planted only a few years ago has taken so readily to the soil and climate that it is spreading rapidly.

It is the three above-named species which constitute by far the greatest Heath area in this country. Indeed, it is beyond doubt that the Scotch Heather alone covers a more extensive territory in Britain than any other shrub, and the Bell Heather must run it a very close second. To these—and to a rather lesser extent to the Cross-leaved Heath—are we indebted for the glory of our summer moors, for that splendour of lilac and purple which invests hill-slope and moor, sea-cliff and mountain-pass with a prodigality of colour and sweetness which is without parallel in our land and with few rivals in any other. It is the heathery moor that is more closely associated with our great holiday month than any other natural feature of the kind, and around it is woven a glamour of romance which none other plant enjoys to quite such a full and universal extent. Nor is it only in our islands that these Heaths so abound. They cover unnumbered miles in various countries of the west and northern European Continent, they sweep over alpine ranges and even invade the sunny slopes of Italy.

As to the other native species, the Cornish Heath (*E. vagans*) and the Dorset Heath (*E. ciliaris*) are considerably more localised. The first named is almost entirely confined to Cornwall and parts of Ireland. The Dorset Heath grows in the county which gives it its name; it extends into Cornwall,

and occurs in South-western Ireland. In the last-named district—in County Galway, to be exact—there is also a form of *E. mediterranea*, known as *E. mediterranea*, var. *hibernica*. How this beautiful variety of a species, which is otherwise confined to Spain and Southern France, came to be isolated in Ireland arouses interest. And the fact that it has for neighbours several other shrubs and plants, such as *Arbutus Unedo*, *Saxifraga umbrosa* (London Pride), and *S. Geum*, which are also southerners and only found in a truly wild state in these islands in that part of Ireland, lends additional interest to the circumstance.

How is it these plants are marooned in certain well-defined areas of South-western Ireland, while the headquarters of the species, the place where they mostly abound, is as far off as the Pyrenees? In attempting to solve the riddle an explanation may also be found for the almost equally restricted range of the Dorset and Cornish Heaths, which, while they occur nowhere else in Britain, are also found in the mountains of Spain. Geologists and botanists are by no means in agreement as to how these solitary outposts of the Lusitanian, or Spanish, flora came to be so far separated from their companions. At least one eminent authority believes that they are (in the geological sense of time) comparatively recent arrivals, the seeds having been brought over by birds. But there are others, these representing perhaps a more general opinion, who aver that these southern Heaths and other stray plants are the vanguard of that plant army which migrated north-

ward long ages ago during a period when the coasts of Spain and the British Isles were joined together as dry land. Subsequently, the sea cut them off from their relations in the south, while the Great Ice Age either checked their northward advance or destroyed all but themselves. This little band of survivors, being "entrenched" south of a line drawn westward from the latitude of the Thames, were just able to withstand the terrors of that Age of Ice and thus they have prevailed until to-day.

Regarding the natural habitats of the exotic, hardy Heaths, little need be said here. *E. carnea*, which gives such glorious masses of colour from January to March, comes from the Central European Alps, where it may often be seen carpeting the ground beneath thinly scattered Pines, its lovely carmine-crimson flowers appearing so soon as the snow begins to leave its rugged heights.

E. mediterranea, perhaps the most valuable of the spring-blooming species, is, as I have shown, indigenous to Spain and the Biscayan shores of France. It has been stated that *E. mediterranea* does not merit its specific name, since it does not extend eastward to the Mediterranean region; but it reaches the Var littoral and grows there in sparsely distributed bushes among the taller Heaths of that coast, although I do not believe it is indigenous to that district.

E. multiflora, of which I have not seen a true specimen in gardens other than Kew, is another Southern European. It may be seen growing in plenty in the limestone along the railway banks

and roadsides east of Marseilles, under arid and often most torrid conditions.

E. scoparia is also a French species, extending over great areas of the south-west and central provinces, where it is used in the making of besoms.

The very distinct *E. stricta* (*corsica* or *ramulosa*) hails from Italy, Corsica, Sardinia, and South-western Europe. Though considered untrustworthy in our climate it has withstood over 20° of frost with me, and it is quite hardy at Kew. No less can be said of *E. mediterranea*, despite the fact that it is, with the exception of its Irish form alluded to, a strictly southern species. Indeed, in this matter of hardiness our own *E. ciliaris* and some of its varieties are in my experience much more liable than the above to be injured by frost, owing to their habit of making their tender growths and flowering shoots so late in the summer.

The true Tree Heath, *E. arborea*, inhabits the hillsides of Southern France, extending eastwards to the Caucasus, and it is also indigenous to parts of Northern Africa, if not to Spain. This noble Heath ranges over vast tracts of the lower hills and mountains which border the French coast of the Mediterranean. The somewhat similar, but less tall, *E. lusitanica* is confined to South-west Europe. Indeed, one may walk shoulder high for miles through honey-scented thickets composed almost entirely of *E. arborea*, which, ever and anon, rises into tree-like proportions above the bushy "maquis." The flowering season of this species in its native region extends from mid-winter onwards to spring, and throughout that period many a hillside will be

sheeted with the curious paper-whiteness of its tossing plumes. In so far as my own observations have gone the above Heath in the South of France was almost entirely confined to siliceous soils, the ground often being extremely rocky and dry.

The wood of *E. arborea* is still employed in Southern France in the manufacture of tobacco pipes, our word "briar," applied in that connection, being a corruption of "*bruyère*," the local name for this Heath. The timber of *E. arborea* is also used to a considerable extent in some districts for fuel. *E. a. alpina*, which hails from altitudes of over four thousand feet in Spain, is considered by some to merit recognition as a distinct species. It is certainly quite hardy, whereas so much cannot be said of *E. arborea* itself, or of *E. lusitanica*. Even so, as these latter will withstand 20° of frost—probably more in a well-drained, light soil—and as they may be grown to perfection in many parts of the Southwest, I have had no hesitation in including them in this volume.

There only remains *E. australis*, the most beautiful of all the taller Heaths. Although introduced from Spain and Portugal so long ago as 1769, this species has never been other than rare in gardens. It is difficult to account for this, for while *E. australis* may not be hardy everywhere, there are many localities where it would do well—quite as well as *E. arborea* or *E. lusitanica*. *E. australis* is, moreover, a May-June flowering species, whereas the above, being winter or early spring bloomers, are more liable to be injured by frost. *E. australis*, it is true, bears its beautiful flower-clusters at the

tips of the shoots of the current year, but even so, and although these shoots and bud-clusters will often be formed, and therefore soft and tender during winter, I have rarely seen them marred by frost. A more frequent and serious menace to these taller Heaths is snow, which, clinging to the very plumose branches, bears them down, with almost certain breakage.

I have not seen *E. australis* growing in its native country, but it is said to cover large areas of the hillsides over most of the western side of the Spanish Peninsula. There it makes dense thickets some three to four feet in depth, often showing a partiality for sandy soils.

Although these hardy Heaths, taken as a whole, undoubtedly are, as that good gardener, Sir Herbert Maxwell (*Flowers: A Garden Note-Book*) reminds us, "a xerophytic or drought-enduring race . . . the best of all things for covering a dry bank," I think that recommendation might be applied with special emphasis to the exotic species. Practically all of these live naturally in places where rainless periods are more prolonged than they are in the driest of our summers, places where the sun heat is intense and where the soil is often of the most impoverished description; and I find that this indifference to drought on the part of these species is fully maintained under cultivation.

CHAPTER II

SOIL AND SITUATION

SOMETHING has been written already regarding the adaptability of Heaths to soils of widely different qualities and degrees of moisture. This will, however, be referred to more fully when discussing the treatment of each species individually as a garden subject. But in regard to soil there are certain general rules to be observed which may be dealt with more conveniently here. One of these is that the Heaths as a whole (there are one or two notable exceptions) abhor lime, or chalk, when it is present in any considerable quantity in the soil. Like their allies, the Rhododendrons, Pierises, Gaultherias, and other Ericaceous shrubs, they are so decidedly calcifuge that most of them will sicken and die, or linger in a weak and miserable condition, in any soil that is charged with lime. *Calluna vulgaris*, and *E. cinerea* and *E. Tetralix*, may be found growing naturally in the turf that covers limestone rock, as on the cliffs at Bull Bay in Anglesey, for example; but the plants are almost invariably stunted and poor. *E. vagans* makes more of a success in a calcareous soil; and while this is probably the best of the British Heaths for such a medium, *E. cinerea* and *E. Tetralix* may often be induced to grow tolerably well, especially where

plenty of lime-free soil or peat has been put around the roots at planting time.

Among the Heaths other than native which can be recommended for a limy soil one of the best is the beautiful winter-flowering *E. carnea*. *E. hybrida darleyensis*, which is a hybrid between the foregoing and *E. mediterranea*, is also reliable, as is the last mentioned, and possibly *E. australis*. In passing, it is desirable to state that the watering of those Heaths which dislike lime with water that is impregnated with lime or chalk, appears to be especially detrimental to their well-being, even although the plants are in perfectly lime-free soil.

Although the Heaths are generally classed as "peat shrubs" there is abundant evidence to show that peat is by no means so essential to their health and vigour as is often supposed. Many species never grow naturally in peat. Sandy peat may be an excellent medium for Heaths in general under cultivation, but better results—from a gardening point of view—are often obtained when plants are placed in a light, freely drained loam. I have grown all varieties of Heaths for a good many years without ever providing them with peat. The soil in which they are established is a slope of thin, shaly loam, much of it often getting very dry and hot in summer, yet the plants have invariably done well. The only assistance they receive is a little leaf-mould worked around the roots at the time of planting. The Tree Heaths, as the reader has already been given to understand, do not need even this addition.

While a stiff, cold, adhesive soil would not be

chosen for any of the *Ericas*, such a medium may often be rendered suitable by mixing with it plenty of half-decayed leaves and sand, some finer leaf-mould being placed around the roots to give them a start. In the absence of decayed leaves, half-rotted vegetable rubbish which has no lime in it will prove useful in improving the texture of a clayey soil. Another excellent material is peat-moss litter, secured in either the usual lumpy condition or granulated. This, however, should be exposed to the weather for some months before it is applied. One great advantage of moss litter is its portability; another is its extraordinary durability, while, like *Sphagnum*-moss (of which it is mainly composed), it remains longer in a fibrous condition in the soil than any other vegetable substance of the kind known to me. Peat-moss is, moreover, a great absorbent, so that while it may be brought into service in dealing with heavy soil, it is equally valuable as a retainer of moisture in ground that dries out quickly in summer. In this latter respect I have found it admirable, both in the soil and as a summer mulch, in dealing with the more thirsty Heaths and allied subjects planted on very dry, hot banks. The finely granulated peat-moss in which imported Potatos and Tomatos are packed, is first-rate for such purposes. It may often be secured free of cost from greengrocers, but, like peat-moss litter, I always leave it outside for a few months before using it.

The main reason why Heaths dislike a soil that is stiff, unkindly, and liable to cake, is that their very fine, thread-like roots cannot traverse such a



ERICA LUSITANICA

medium. On the other hand, the porosity of sandy peat, for example, allows them unrestricted action, and this fact has no doubt done much to popularise that material among gardeners. But the other substances alluded to—leaf-mould, vegetable compost, sand, and peat-moss—are not less effectual in breaking up a stubborn soil and making the way easy for the roots. All these give the soil humus, and humus, be it remembered, is not only essential as a reservoir of plant food and moisture—practically synonymous terms—but is instrumental also in rendering a cold loam warm and a hot one cooler, and it has such a loosening effect upon a heavy soil that the extremely fine roots of Heaths can enjoy a freedom of growth which would otherwise be denied them.

I have emphasised the above point at the risk of repeating myself, because it is of the utmost importance. At the same time it must not be supposed that I am advocating a rich soil. This is anything but desirable, often causing Heaths to become gross in habit, unnatural in appearance, and poor in flower. They like an open, free soil, but many, perhaps most, kinds (especially the taller ones) thrive so satisfactorily on what would be poverty to most shrubs that it is always wise to err on the side of the strictest moderation in preparing the ground. If, for example, the nature of the soil demands attention in the way of breaking up and lightening, and there is a fear that it may be made too rich by the use of sufficient organic matter to fulfil that end, I should not hesitate to fall back on sand, grit, rubble, and stones.

These last-named materials also assist drainage ; and thorough drainage, I need hardly say, is not less essential than a friable soil. Even where there may not be actually stagnant water, the soil merely being soggy and inclined to set, something should be done to render it freer and more open. The fibrous organic substances referred to will, of course, greatly improve such land, but sand, coarse grit, and even fairly large stones along with it, will render it still more effectual. Many, if not all Heaths seem to like a root run that is more or less stony, provided it is suitable in other respects. This is probably explained by the fact that while stones about the roots assist drainage and encourage root action, they also do something towards the conservation of moisture in dry weather. A buried stone in the driest of soils is nearly always cool and damp, and round it the feeding roots of Heaths will weave a mesh of thin, hair-like strands with a clinging tenacity which suggests approval, to say the least.

SITUATION

There is little that need be added to what has already been written in a general way under this head, but it may be useful to point out that while the Heaths are inveterate sun-worshippers and revel in the breezy, open positions, the native species in particular undoubtedly enjoy a rather humid atmosphere. Where one has a choice in the matter of aspect, a gentle, westerly slope would probably be the wisest selection, especially as the blooms of

some varieties are liable to bleach a little in very hot sunshine. But aspect really, on the whole, makes little difference.

Few shrubs withstand wind better than Heaths, nevertheless in all but the mildest localities it would be advisable to give the Tree Heaths some shelter. Many Heaths grow naturally in close proximity to the sea, so that, other conditions being suitable, the gardener by the seaside need not hesitate to try a wide selection.

Much as the Heaths, as a race, delight in full exposure overhead, there is one, *E. carnea*, which does splendidly beneath tall deciduous trees. *E. cinerea* also often thrives well enough in such conditions to make a pretty carpeting to thin woodland ; but as this species flowers when the trees are in leaf the colour is often rather washy. Even so, a stretch of the pale bluish-purple (I am referring to the type species) in sun-dappled shade is singularly attractive. With *E. carnea* it is, of course, quite different. This excellent Heath is in bloom when the boughs above it are bare, but the fact that it develops its new growth and flower-buds when the trees are in full foliage is the best proof of its adaptability to conditions of the kind. I am not suggesting that *E. carnea* is what we understand by the term "a shade plant," but if it is established under, say, Oaks, whose lowest boughs are some fifteen feet above the ground, it will succeed, and that right well.

CHAPTER III

PROPAGATION

IN general practice there are four methods of propagating Heaths, all of them within the scope of any average amateur's ability; *i.e.*, from seeds and cuttings and by layering and division.

Any species of which good seeds can be obtained may be raised therefrom, but none of the varieties or hybrids, so far as I am aware, can be relied upon to come true from such a source. These must be raised by one or other of the methods dealt with hereafter.

Heather seeds should be sown in spring, in pans or pots filled with a mixture consisting of at least one part of sand to two parts of finely sifted, old, black leaf-soil. The seeds must be very lightly covered and the pans kept in a cold frame until germination has taken place. The frame should be screened from very hot sunshine or be so placed that a fairly uniform moderate temperature is maintained. The compost must be kept damp, but not wet, throughout the process.

When the seedlings are large enough to handle they should be pricked out, three inches apart, in pans or boxes, a similar compost being used. These are again put into the frame, which is kept closed for a few days, care being taken that it does not get too hot. An occasional syringing, using a mist

nozzle, will do much to help the little plants to become re-established, but for watering both these and the seed-pans I prefer to hold the pans to the rim in a tub of water, allowing the latter to rise gently through the compost from the bottom until the surface is moist. So soon as the seedlings have begun to re-establish themselves ventilation must be given in steadily increasing amount, so that full exposure may be allowed so soon as possible without distressing them.

When the little plants are about twice the height they were when pricked-out they may be transplanted six inches apart in a nursery bed, or direct to their permanent quarters. I prefer to keep them in the nursery-bed for a year. Such a bed may be made in any spare part of the garden where the soil is of an average well-drained loam with full exposure. It should, however, have some leaf-mould or finely broken peat forked into the surface. This not only gives the roots something to work into, but it allows the plants to be lifted the more easily with a ball of soil at the roots, when the time for the final moving comes round. Anything in the nature of forcing, either by too much confinement under glass or by feeding, must be avoided. Young Heaths raised from seeds are almost universally sturdy and shapely. They should be of useful size for planting-out after a year in the nursery-bed, and not a few of the dwarfer kinds will begin to show flower the following season. As all the Heaths transplant well with ordinary care, there is no need for the amateur to grow his young plants in pots.

Perhaps the most general method of propagating Heaths in nurseries is by cuttings, but while many varieties may be raised fairly readily by this means in an ordinary cold frame, others are a good deal more difficult to deal with and need gentle bottom heat. Among the former I should place all the native species and their varieties, *E. mediterranea*, *E. hybrida darleyensis*, and *E. stricta*. The Tree Heaths are tolerably easy to raise from cuttings, but *E. australis* seems to be notoriously difficult without bottom heat. Nevertheless, a goodly proportion of cuttings of this Heath and its beautiful white form have been struck in the ordinary way or under hand-lights. Some authorities recommend cuttings of about three inches in length for this species, these having some of the previous year's wood at the base, and there is no doubt but that cuttings of this kind are often successful with all the Tree Heaths.

To return to the preparation of cuttings in general ; these should be made in July or August. Little, unflowered side-shoots, about an inch in length, are usually the best, these being neither too soft nor too hard and woody. I take them off with a " heel " by a gentle downward pull. The leaves are then carefully removed from the lower half, using a sharp knife to avoid tearing the bark. The cuttings are then inserted in well-drained pots nearly filled with very sandy peat, or fine leaf-mould and sand in equal parts. They are put in to half their depth and made quite firm at the base. The surface of the pot is then coated with silver sand or a mixture of sand and granulated charcoal. There need be no limit to the number of cuttings placed in each

pot, so long as there is room to work a finger between them. When the cuttings are potted each pot is gently submerged to just over the brim in water until air bubbles cease to rise from the compost; then it is removed and allowed to drain. The pots are then put in a closed frame, in full sun, the glass being whitened in the usual way.

When a slight bottom heat is employed it will be more convenient to use bell-glasses or portable lights for covering. Cuttings treated in this way will often be rooted in three or four weeks, but with the ordinary frame they will require a good deal longer, much depending on the temperature or weather. The cuttings may always receive the benefit of the doubt in this matter. A few weeks longer in the frame does no harm, but so soon as there are indications of the cuttings having rooted ventilation must be given, a little at first, gradually increasing the amount until they can withstand something approaching full exposure. But great care must be taken at this stage lest the plants get burned by very hot sunshine. If it seems desirable, sheets of newspaper or pieces of tiffany may be used as screens. It is equally important to see the cuttings do not lack water, indeed, it is a good plan to sink the pots to the rim in a bed of ashes in the frame, as this will help to conserve moisture; but a syringing with tub water early every morning will be beneficial, especially in dry weather, so soon as the cuttings are "taking the air" freely.

The pots of rooted cuttings may be left in the bed of ashes in the frame throughout the winter, and they will need little attention beyond regular

ventilation. The following spring the pots may be plunged in the open ground for a month or two, or the plants can be at once pricked-out into a nursery-bed as advised for seedlings. If they are well-rooted and healthy the sooner they are put out the better. There they will remain until planted-out permanently, either the following autumn or during the next year. These, like the seedlings, do not need any special attention while in the nursery-bed. They must, of course, be kept weeded and should never lack moisture, especially when first put out. If the soil is dry and sandy a top-dressing of leaf-mould, or granulated peat-moss, will go a long way towards maintaining a uniformly moist condition.

When planting out seedlings or rooted cuttings too much care cannot be exercised to preserve the thread-like roots uninjured. The bed must be worked into a nice friable condition and the slender roots must not be pressed in firmly. The "gardener's heel" is a mistake with Heaths of any kind or age, but it is particularly hurtful in the case of young plants.

Layering is one of the easiest (often the best) ways of increasing Heaths of all varieties. Once in possession of an established specimen any amateur may raise good plants from it in a comparatively short time. The process simply consists of taking any convenient branch that is near the ground and pegging it down into a little bed of leaf-mould and sand. Large hair-pins, or pieces of wire bent into the same shape, are useful as pegs, but I do not as a rule use anything but half a brick, or a stone of that size, to keep the branch in position. A porous



ERICA ARBOREA IN WOODLAND

brick is, I think, best of all, for it keeps damper on its underside, which means that it helps to conserve the moisture in the leaf-mould and so encourages rooting.

It does not matter very much what kind of a branch is selected for layering, but the younger it is the quicker will it respond. Most of the Heaths are always so ready to put out stem roots into any damp, leafy material in which they are embedded that it is not necessary to notch the layer to encourage rooting, as is done when dealing with Carnations, nor is it essential to remove the leaves from the layered portion. Two or three inches of the leaf-mould and sand under the branch, and about two inches, or even less, above the buried portion, is sufficient. Layering may be done at any season, and although rooting may take place sooner it is advisable to allow the layer to remain for two years before severing it from the parent plant and transplanting it. There is nothing lost by waiting, for the layer will be growing all the time. Then, when it is lifted for removal, there will be a very much larger plant than can be raised by any other means in the same length of time. Although no less care must be exercised in transplanting than in the case of seedlings or rooted cuttings, a well-layered plant may usually be put directly into its permanent place.

It is often possible to increase Heaths by division of old clumps. This applies especially to the dwarfer kinds, but it is not a method of propagation that is often likely to be pursued by the average gardener. In the first place he is seldom inclined

to dig up a specimen and pull it to pieces ; moreover, the pieces are often so lanky and ungainly that many years must elapse before they become decent plants, if, indeed, they ever do. But if, for some reason or other, a choice Heath has to be moved, the opportunity may be seized for obtaining from it some of the best of the nicely rooted, shorter portions, these being put out as individual plants or grouped.

At some nurseries, Heaths are propagated by division in the following way : a clump is lifted and replanted very deeply, with plenty of leaf-mould or peat around and among the upper parts of its branches. In a year or more the clump is lifted and the branches, having rooted up towards the surface, are divided into so many new plants. But this plan has nothing to recommend it to the private gardener, who has at hand, in layering, a readier and more successful adaptation of the same principle.

Many of the dwarf Heaths will, of course, layer their own branches naturally, putting out roots into the humus formed by their own leaf-fall, or into the soil. That pretty little Heath, *E. cinerea coccinea*, layers very freely in this way, as does *E. carnea*. In such cases an easy means of increase is at hand and is invariably successful, the rooted branches being treated precisely as advised for those artificially layered.

CHAPTER IV

HEATHS AS GARDEN SUBJECTS

ALTHOUGH Heaths are more popular in gardens than formerly, it is surprising they have not been grown more extensively and with greater enthusiasm. The unique beauty of most species and varieties is beyond question ; they are, as I have already shown, singularly adaptable to soils and situations, and where can be found any other race of hardy shrubs which includes varieties one or other of which will give colour every month of the year from January to December ? In that respect alone the Heaths deserve the fullest appreciation of all lovers of flowers and gardens.

It is obvious there are hosts of amateur gardeners who do not half realise what a magnificent display of colour can be afforded by Heaths, and there are numbers of people who, generally interested in gardens though they be, have no knowledge whatsoever of the finer varieties. There are equally as many who have never realised that Heaths may be used in such a wide variety of ways that there is no garden, however great, however small, in which they may not take a part, and that by no means an unimportant one.

It is understandable that in the old, formal-gardening days there was not much scope for

Heaths, but in these days of the rock-garden and the wild and woodland garden, when most garden lovers are striving to get away from the formal, to foster a more artistic spirit and create a more natural effect, the Heaths must come into their own, since for all these phases of garden work they are ideal subjects. Indeed, it is mainly because of all this, because I know that Heaths may bring pleasure and satisfaction to tens of thousands of gardeners to whom they now mean little or nothing, that I have been urged to write this little book.

“Why,” asks the Grand Old Man of British gardening, Mr William Robinson, “should we have such things as the *Alternanthera* grown with care and cost in hothouses and then put out in summer to make our flower garden ridiculous, while neglecting such lovely hardy things as our own Heaths and their many pretty varieties? But very many people do not know how happy these Heaths are as garden plants, and how well they mark the seasons. . . .”

That is just it; they do not know. If it is a constant surprise to me to find, as I take visitors round my modest collection, how little they know even of the existence of many of the choicer Heaths—which are by no means rare—it is still more surprising to realise the misconceptions which still linger in people’s minds regarding these plants generally.

Because holiday-makers have for generations taken home with them roots of Heather which they have pulled from some roadside or moor, and which have promptly died, there has arisen a very common



ERICA ARBOREA VAR. ALPINA

belief that Heaths are difficult to move, whereas nothing could be further from the truth in garden practice. Again, when I point out several lusty clumps of the white variety of the Scotch Heather and refer to them as "White Heather," many—very many—will frankly treat the incident as a jest. They have been brought up in the belief that "genuine White Heather" never did and never could grow in a garden, although they may be too polite to say so! That these and other absurd notions should exist is unfortunate, since it means that a large section of the public are nursing superstitions which stand between them and avenues of pleasure which are wholly unexplored and of endless diversity.

Generally speaking, Heaths in the garden are most satisfactory when arranged in broken masses. That is their natural way of growing. They enjoy their own company and show to better advantage in the group than in any other way. But in making that statement it must not be thought that I underestimate the value of the single plant. Nor am I going to pass by the large number of uses to which Heaths may be put, quite apart from massing in the ordinary sense. The latter will be dealt with in referring to the Heath Garden proper. For the moment, some of those outside features of gardening to which these plants may be put may be considered.

HEATHS IN THE ROCK-GARDEN

There is no part of the garden where Heaths are more satisfying than in the rock-garden. I will also

go so far as to assert that there is no race of dwarf shrubs or plants to which a rock-garden may owe so much as to these, for they are of all things the most effectual in imparting the charm of naturalness and maturity which we all so much desire in such gardens. This is due in part to the fact that many of the dwarf Heaths are rock-haunting plants, loving to adorn the ledges and even the chinks of the rocks with verdure and blossom. *Erica cinerea*, in particular, delights in a rocky root-hold, and that species, as will be shown later on, affords us such a wide range of beautiful varieties that plants may be chosen of any size from three or four inches up to two feet in height.

E. carnea is another first-rate rock-garden species of low habit, and one that is invaluable for giving winter colour. *E. hybrida darleyensis* is admirable for the bolder parts, and it again will cheer us through the dullest days of winter with its masses of fresh, rosy-purple blossoms. Then there are such excellent kinds as *E. ciliaris*, *E. c. Maweana*, *E. h. Watsoni*, and others, which are not only of suitable size and habit for the rock-garden, but they will give a bountiful crop of their lovely blooms until quite late in the year, long after most rock-plants are over.

Regarding the planting and arrangement of Heaths in rock-gardens it is not possible to write very much, for every garden differs, as do individual methods and tastes. But I may state in passing that *E. cinerea* and the winter blooming kinds may always be planted in the driest, sunniest places, and this without any very special attention being given to the soil. In my own rock-garden the Heaths in

general do very well in the gritty, lime-free loam, but this is usually supplemented by a little leaf-mould in the case of the later-flowering sorts.

In selecting positions for the various varieties the planter will naturally place the tallest and strongest growers at the back, or among the larger subjects, the dwarfs being accommodated with positions towards the front. In any event, save perhaps in the case of carpeting species, like *E. carnea*, I should not be afraid of fitting rock-garden Heaths into fairly close quarters. Root restriction and rather a lean diet will encourage slow growth and more blossom, both of which are desirable under such circumstances.

AS EDGING AND HEDGE PLANTS

No one who wishes to make a live edging or bordering should omit to give fullest consideration to the suitability of Heaths for such a purpose. Varieties adapted for such a use are as easy to grow as Box, much more ornamental, not nearly so exhausting to the soil, and they involve less labour in upkeep. What can be more beautiful than a neatly trimmed (not sheared) edging of *Calluna vulgaris cuprea*, with its golden-green foliage, which glows with a warm coppery hue during winter? Then there is the ever-useful *E. carnea*, which, if it has the flower-heads removed so soon as they have begun to fade in spring, will be a delightfully fresh green all the summer and a belt of crimson-carmine from soon after Christmas until Easter. The variety Vivelli of *E. carnea* is also an excellent little shrub

for a small edging. It is dwarfer than the type, the flowers are of a deeper shade, and the foliage a very dark green.

If something stronger, broader, and taller is required to form a bolder edging, or low ornamental hedge, there are in the best varieties of *E. vagans*, *E. cinerea*, *E. h. darleyensis*, and *E. stricta*, first-rate material for such a purpose. By a judicious use of the knife after flowering these may be kept to any required height, and their shapeliness will be preserved without introducing formality.

Low hedges of this kind are singularly ornamental and most useful for a wide variety of purposes. Further, by exercising a proper choice in selecting the right variety, and pruning accordingly, it is possible to have a bordering from a few inches to several feet in height. The Heath may be chosen for the foliage or the flowers, or both, and when colour is desired it is possible to select a variety that will be at its best at almost any season of the year.

The spacing, when planting Heaths in lines as a bordering or hedge, will, of course, depend upon the variety and the height to which it is to be allowed to grow. A foot apart is not too much for, say, *E. carnea*, when a fairly broad bordering is one's object, but half that distance will do for the variety *Vivelli* and for the smaller varieties of *E. cinerea*. *E. h. darleyensis* and *E. stricta*, however, will need to be planted eighteen to twenty-four inches apart, if they are to make a hedge of from two to three feet in height. But much depends on the pruner and not a little upon the soil. At any rate it is wiser to err on the close side in spacing for edgings, for

Heaths do not mind being crowded, and odd plants may always be removed should there be too much congestion.

FOR CARPETING

In an earlier chapter some reference was made to the adaptability of certain Heaths for growing in thin woodland. In this connection the problem of how to cover the ground beneath trees is one that frequently occurs. But in addition to creating an interesting and beautiful undergrowth, there are occasions when Heaths may be used for carpeting so as to fulfil other and very practical needs.

Consider a plantation of Azaleas, or any other shrubs which enjoy a cool root-run. What can be better as a ground covering than some of the low-growing Heaths? These not only assist in keeping the soil moist by checking evaporation but they afford a display of colour which, if discretion is exercised in the selection of varieties, will be in season when the accompanying shrubs are out of bloom. Further, I have found that Heaths used in this way as carpeters mean a vast saving in labour, for they soon smother weeds which would otherwise demand constant hoeing, and they need a minimum of attention. If this is borne in mind many opportunities for planting such Heaths will occur to the gardener who desires to reduce labour expenses and at the same time add to the beauty of his garden.

For individual trees which need a cool soil, such as the *Eucryphas*, one or two lowly Heaths grown near the base will be all that is desired. Then for

the borders of shrubberies and the margins of Rhododendrons, some of the taller of the dwarf varieties may be used both as carpeting subjects and to give colour in their due season. Even for such trees as ornamental Cherries, Magnolias, and the like, a ground-covering of Heath has much to recommend it, both from the point of view of economising labour and enhancing the general effect.

IN THE MIXED BORDER

In these days when so many are realising the charm, to say nothing of the economy, of the mixed, as differentiated from the herbaceous border, Heaths again make their appeal. Few objects are more attractive, and few so telling in effect as a well-grown bush of some choice Heath in the mixed border. The foliage alone of all species is peculiarly arresting, and this, quite apart from the blossom, will never fail to arouse admiration and lend distinction to any assembly of shrubs and plants.

AS BEDDING SHRUBS

Very charming beds may be made up entirely of Heaths, such groups being afforded a commanding position on the lawn or along the margins of drives. These will, of course, be of a size to suit the surroundings, and the choice of varieties will be decided by individual taste and to some extent by the climatic conditions—the Tree Heaths being more reliable in some places than others.

But there is a wide scope for the exercise of ambi-

tion and originality in such a matter as this. A bed of *E. mediterranea* alone will make a glorious patch of colour from the first warm days of May onwards, as those who know Kew Gardens can testify. On the other hand, a group made up of, say, *E. arborea* and *E. lusitanica* in the centre, with some bushes of *E. mediterranea*, *E. stricta*, and *E. australis*, leading down to a selection of the dwarfer sorts at the edge, may be arranged so that one or other of the kinds will be in flower during practically every month of the year. But in this respect there is, as suggested, illimitable opportunity for enterprise. Yet the Heath grouping, or Heath bed, despite its wonderful possibilities, its unique charm, its economy in labour, and the ease with which it may be produced, is still comparatively rare in gardens.

HEATH WALKS

There is yet another opportunity for the use of Heaths, and that is the covering of walks as a substitute for turf. Every one who has an observant eye must have noticed how moorland tracks are often closely carpeted by heaths. They are pleasantly green at all seasons, delightfully springy to walk upon, and wear extraordinarily well. There is no reason whatsoever why we should not again take a leaf out of Nature's book and introduce that feature to our gardens. Heath walks or drives are most appropriate in wild or open woodland gardens, in the Pinetum, among Rhododendrons and other shrubs. For the Heath Garden itself there could

be nothing better, and in many rock-gardens they would be most distinctive and harmonious.

The most suitable Heath for this purpose is *E. cinerea*, but *Calluna vulgaris* is also good, and these do quite well together. The best way to lay down a Heath walk is by sowing the seed broadcast about the end of May. If the surface is hard, stony, and well drained, as a path should be, so much the better will the seedlings grow. The seeds only require to be raked in, this being followed by a good rolling, and the latter should be repeated once or twice during the first summer. For one year the seedlings may be allowed to grow at will, but when they are about a year old they may be mown, the machine being set rather high, especially to begin with. It is a good plan to top-dress lightly with sand and sifted loam about a month before mowing commences, and this dressing may be worked-in with a besom and rolled.

CHAPTER V

A HEATH GARDEN

ALTHOUGH Heaths can fulfil with such singular satisfaction a large number of requirements in gardens generally, it is undoubtedly in the Heath Garden itself that these shrubs and their allies display their full value. They are of all subjects naturally the most adapted for massing and grouping in spacious reaches. They delight in the company of their own kind, and it is well-nigh impossible for the veriest novice to go wrong in blending the colours, for practically all are in harmony and accord one with another.

So long as the soil is suitable (see Chapter II) and the situation fairly open and sunny it does not matter very much how or where the Heath Garden is laid out. A gentle slope (preferably to the south or west) is the most suitable, since this allows a more advantageous view of the scene, and the majority of Heaths in bloom look more attractive when seen from about the level of the eye. If the ground is undulating, so much the better; but flatness of contour, whether dealing with a slope or the level, can always be relieved by a few well-chosen and well-placed boulders, or by groups of the taller kinds among the lesser. I shall deal later with the use of shrubs other than *Ericas* in the Heath Garden,

but may add in passing that clumps of Gorse, Brooms, dwarf Pines, Junipers, and the like, may also be employed with delightful effect in relieving a too uniformly even stretch of ground.

The fact that most soils suitable for Heath culture need a minimum of preparation is one that will never fail to make its appeal. But having already dealt with this matter of soil, all I propose here is to consider the laying-out of a Heath Garden under normal conditions. The first thing to do is to grub up Brambles and other bushes, eradicate any particularly noxious weeds which may happen to be in possession, and dig the site over. If convenient, a layer of half-decayed, or even fresh, autumn leaves may be worked in at the same time. Should the plot be under turf the prospect is rather different, and the area to be tackled must decide whether the plough or the spade be used in the breaking-up process. In most cases it will be the latter tool, and I know of no better way, consistent with economy, of getting the work done than by double-digging, the sod being laid face downwards between the two spits.

Should the plot be so steep that digging is rendered impossible there need be no dismay, for the Heaths are so amenable and willing that they can be put direct into ground which has had no attention beyond a light forking-out of the worst weeds and tussocks of grass. Rocky banks may demand some attention in the way of adding fresh soil to places which are deficient, and it may be essential, here and there, to build up pockets and ledges so as to afford better root-hold for the plants which are to occupy them.

A light to medium loam is better, in my experience, than most peats for the majority of Heaths, but if there is no choice in the matter and peat is present, the first essential is good drainage. Then the land, especially if no Heaths are growing naturally on it, must be well turned up, and after an interval turned again so that it may be thoroughly sweetened before planting. A few Heaths, like some Rhododendrons, will succeed even when there is a certain amount of acidity in the soil, but all kinds thrive much better without it. I repeat that no one who has a decent, lime-free loam need trouble to go to the expense and toil of mixing peat with it. This is wholly unnecessary, despite the popularity of the belief that it is essential.

PLANNING THE HEATH GARDEN

In the laying-out of a Heath Garden so much depends upon the contour of the land and other incidentals that it is practically impossible to give any very definite directions under this head. I have already suggested that while *E. cinerea*, *E. carnea*, and a few more may be given the driest places, such moisture-lovers as *E. Tetralix*, the Dorset Heath, and their nearer allies will appreciate any cooler spots which may exist. Again, should the situation be very exposed to wind, it will follow naturally that the taller kinds (which are also the most tender) will be placed where they will have some protection.

Generally, it is, of course, a sound rule to place the dwarfest Heaths at the front, working back to the tallest at the rear, or most distant point. But

any tendency to too much uniformity must, as I have hinted, be avoided. It is always best to group the plants of each species or variety separately, the number in each group depending entirely upon the area to be dealt with. In a small garden, for instance, three to five plants of any one sort will often be enough for a beginning, whereas in larger undertakings the dwarfs may be established in fifties or more.

Although I do not propose any hard and fast rule as to the relative positions of the various types, some thought must of necessity be given to their respective characters and habits. This, not so much because the larger may shadow, or over-grow, the lesser, but because some Heaths blend more happily together than others. *E. mediterranea* will, to give an illustration, look better alongside *E. stricta* than would *E. c. coccinea* ; and *E. vagans* will make a more suitable companion for *E. h. darleyensis* than *Calluna vulgaris* or *E. carnea*. In such combinations, which I suggest at random, the planter will find that not only do the Heaths make a pleasing group, each serving to accentuate the individualities of the other, but one will always be in bloom when its neighbour is either over or not yet in flower. That is a point which may be borne in mind throughout the planting.

Regarding the colour arrangement, every one may indulge his own tastes as fancy leads him. I have already stated that it is scarcely possible to go wrong even in placing together batches of several varieties of, let us say, *E. cinerea* or *C. vulgaris*, for the various shades of purple are usually in accord. At

the same time I would not, from choice, put the rich warm crimson *E. c. coccinea* next door to *E. c. atropurpurea*, because while the latter has blue in its purple the former has none. The two colours disagree, and one neutralises the other. How much more telling the little *E. c. coccinea* can be when it has alongside it a dwarf white, or when it alone is crowning the head of some outcropping boulder, is not easy to realise until put to the test.

Again, some of the newer varieties, notably of *E. vagans* and *E. cinerea*, have very little, or none at all, of the blue in their colouration. I refer to the warm rose, salmon-rose, and deep cerise tints of such fine kinds as *E. cinerea* var. *Frances*, *E. vagans* vars. *Mrs D. F. Maxwell* and *St Keverne*. These should not be placed by the side of blue-purples flowering at the same time. Further, I should always endeavour to avoid allowing the singularly soft and delicate lilac of the double *Ling* to be overwhelmed by anything of a stronger, brighter hue. It would be equally destructive to group the very dainty, pale shell-pink *Apple Blossom*, a variety of *E. cinerea*, with any of the whites. The latter are always useful as breaks between two colours which do not blend or which are too much alike.

Before starting to plant it is desirable to prepare a rough plan to scale, showing where each species or variety is to be established. Guidance as to heights and spread of the various kinds will be found in later chapters, but I may add here that it is always wise to err on the generous side in spacing for the more spreading Heaths, such as

those of the *E. cinerea* and *E. vagans* class. The more upright growers like *Calluna vulgaris* vars. *Hammondii* and *Alportii*, or *E. mediterranea*, although they may grow taller than the foregoing, need less elbow-room.

In designing the planting plan it will tend to less formal effect if the groups are made somewhat irregular, each one running into the other; and if there is a tendency for the groups to widen towards the front, narrowing to the back rather than to one side or the other, so much the better, especially in dealing with the dwarf subjects.

A path, or paths, there must always be in the Heath Garden, and will naturally be included in the suggested plan; few features are of greater importance. Thus, a path which harmonises with its surroundings greatly enhances the general effect, whereas one that is badly conceived may mar the whole. But here, again, I can do no more than make a few suggestions, for it will always be the lie of the land, the area of the garden, and other incidentals which must guide the gardener in deciding upon the direction, width, and nature of the paths. I may state, however, that it is always wise to avoid making the path too wide, that is, out of proportion to the size of the garden. It is better to have the walk too narrow than to be too generous in the opposite direction, even in quite large spaces; and it is often sufficient to have mere footways, with or without stepping-stones, linking up the main paths.

The Heath Garden path must always have as natural an appearance as possible, and a better

object-lesson one could not have than a sheep-track on some Heather moor. Such a track usually has a definite objective, to reach which its direction, from end to end, is probably straight; but it winds and twists, but only to avoid some hummock of Heather, rock, or bog. Wherefore, in planning a path, let its turns have an equally definite justification: the path that wiggles in serpentine curves which have no such justification is ludicrous.

A path's first duty is, of course, to "get there" in the easiest possible way consistent with the nature of the ground. It will take the line of least resistance, not only in the manner already suggested, but when ascending a slope it will ascend by the easiest grade. Here, again, the sheep-track will prove an invaluable guide, for there are few better judges of grades than hillside cattle.

An edging of anything of a formal nature is intolerable in a Heath Garden. The Heaths themselves must form their own edging by spreading over the margins of the walk in a broken line, and in this matter the Heath gardener may feel especially happy, for few plants are so little liable to injury by passers-by as these.

As to the surfacing, or construction, of the path, some rubble or coarse gravel may be essential at the outset, where the soil is damp or peaty. But as a general rule I like the walks to be covered by native herbs and fine grasses or the Heaths themselves (see p. 39). In my own garden these paths are carpeted by seedling Heaths, *Acænas*, prostrate *Veronicas*, such wild plants as the dwarf, creeping

Hypericums and Potentillas, Sheep's Scabious, Thymes of various kinds, and many other little subjects which will take care of themselves. Such a path seldom needs any attention, and the effect is pleasing and in keeping with the surroundings. Green turf walks are always delightful in the midst of spacious plantings, but although they entail some labour in upkeep and in preventing the Heaths which encroach from being injured by the mower, they are preferable to gravel from the point of view of appearance.

Groups of the taller Heaths may always be used to relieve any tendency to flatness which may occur in dealing with level ground, but a bold outcrop of rock here and there may be very telling if well placed. Here, once more, a study of almost any Heather moor will afford valuable hints. In the absence of rock, one might introduce irregular mounds of soil. These may be singularly natural and beautiful when crowned with some of the dwarfest of Heaths, and there is nothing more charming, nothing more in sympathy with the environment, than a mound, preferably with partially embedded rocks, covered by a selection of the creeping Thymes and a few Harebells to bloom when the Thymes are past their flowering period.



ERICA CINEREA VAR. APPLE BLOSSOM

Edinburgh

CHAPTER VI

PLANTING—AND AFTER

It should not be necessary to state that Heaths must be put into the soil with as little delay as possible after the arrival of the plants from the nursery. Some nurserymen send out their plants with a ball of peat or soil about the roots, in which case that drying of the fine root fibres, which is so injurious, is very largely averted. But even with these there are often hair-like roots on the stems, towards the foliage, which have none of this protecting mould. Such roots soon perish if allowed to get dry. Should plants with naked roots be suffering in this way on arrival, and especially when the foliage shows signs of wilting, they should be entirely submerged in a tub of water and left to soak for a few hours. Another method of reviving plants where only a few are involved consists in laying them in a shallow trench and entirely covering them, foliage and all, with soil. Left thus for twenty-four hours, or even longer, they "plump up" in a remarkable manner. Plants sent out in pots may be placed in the soil without disturbing the roots.

Regarding the actual planting the reader will already have noted a few hints. Little further may be added beyond stating that the plants must be put

in rather deeper than the earth-mark on the stem. If they are leggy they may be placed still deeper, and deep planting is especially desirable where the soil is light and liable to dry out in summer. On my own dry banks, Heaths are invariably buried well up to the foliage, and where the pitch of the slope is steep the holes are made more or less laterally, instead of perpendicularly.

The soil having been thoroughly prepared, as advised in a previous chapter, the most important need is the right conditions for planting. It is bad practice to attempt this work when the earth is wet and sticky. Better heel-in the plants and wait until the soil is friable than attempt to plant under such circumstances. I always use a spade for this job unless the plants are small, when a trowel is obviously the better tool. As a general rule the roots are put in straight down. If the hole is made considerably deeper than the length of the plant demands, and the latter is gently lifted to the desired height after about half of the soil or leaf-mould is filled in, the fibrous roots, which may otherwise have got doubled up, will assume a downward direction. This is a point which involves little extra trouble, yet one that must tend to afford the plant more favourable prospects.

If the soil is peaty, or contains other humus, all will be well, but should it be deficient in such material shake a little fine leaf-mould around and among the roots. In addition to this I often place a stone or two (about the size of half a brick) among the leaf-mould and against the roots. This is done more especially when planting on dry, gravelly

slopes, and it undoubtedly helps to conserve moisture if it does not directly encourage root action, and it also assists drainage in land that is inclined to be wet.

I am not an advocate of treading-in Heaths, although the larger kinds may be treated in that way, especially when turned out of pots ; and the heavier the soil the less should the pressure be. It is enough, speaking generally, to firm the soil gently with the hand, or the handle of the spade. All the spring to autumn flowering varieties should be planted for preference in October or November, although later will do, but the winter-flowering Tree-Heaths, *E. carnea* and *E. h. darleyensis*, ought to be put in at least a month earlier. Should the weather and soil be dry at the time, the plants will make a quicker start and be able the better to withstand undue evaporation if “puddled.” This simply means that an attendant with a watering-can pours some water into the hole during the process of filling in.

MOISTURE CONSERVATION

It may happen that a dry spring and early summer will prove trying to Heaths planted the previous autumn or winter. To counteract this it is a good plan to place over them some litter, such as Bracken or hedge brushings, or evergreen branches, until moister conditions prevail. Individual plants suffering from the same cause may be well mulched with rough leaf-mould, or half-decayed leaves, heaping this, if need be, over the foliage of dwarfs. Some such attention is more satisfactory than watering,

even where the latter is practicable, but a spraying with tub-water or pond-water in early morning and last thing in the evening is always helpful in dry, hot weather—especially as an addition to the above precautions.

During its first season a Heath Garden will naturally show a good deal of naked soil. This is not merely unsightly—that is a matter of opinion—but it means that evaporation of the moisture which is always rising to the surface is very rapid in dry, warm weather. If that escape can be checked it is obvious the plants will fare better and be able to carry on longer should drought be experienced. There are various methods of arresting such evaporation. The coverings, or mulchings alluded to in the preceding paragraph are means to that end, but they are of a somewhat temporary nature. By frequently hoeing a loamy soil in dry weather a dust mulch is created which is undoubtedly efficacious in checking evaporation. But this means labour, and it means also that the soil is kept bare. There is an alternative, and this consists in sowing the ground between the plants with Annuals of a suitable kind. These, by covering the soil, will do much to conserve moisture, they will give the smaller Heaths a little shade, which is often very desirable during their first summer, and—what will be an immense satisfaction to some—they will cover the somewhat raw-looking ground with a display of bright colour throughout the season.

In selecting the Annuals for this purpose each gardener may follow his or her own fancy, always provided those of too robust a nature are excluded



ERICA CINEREA VAR. ROSEA, AND ROSA WICHURAIANA

from the list, for it is the Heaths, after all, which have the prior claim to consideration. Some may prefer to sow the kinds separately in patches or areas, others in mixture. In any case seeds which are inexpensive, which will germinate freely after broadcast sowing and raking-in, and which will yield plants giving a long season of bloom, will be favoured by most.

Here is a short list of Annuals (catalogue names) which I have found adaptable to the purpose in view, and which fulfil all the above requirements :—

<i>Bartonia aurea.</i>	Marigold, French dwarf.
<i>Calliopsis</i> , dwarf mixed.	<i>Matthiola bicornis.</i>
Candytuft.	Mignonette.
<i>Collinsia bicolor.</i>	<i>Nemophila insignis.</i>
„ <i>grandiflora.</i>	<i>Omphalodes linifolia.</i>
<i>Eschscholtzia tenuifolia.</i>	<i>Saponaria calabrica.</i>
„ <i>cæspitosa.</i>	<i>Silene pendula compacta.</i>
<i>Lasthenia californica.</i>	Sweet Alyssum.
<i>Leptosiphon densiflorus.</i>	Virginian Stock.
<i>Limnanthes Douglasii.</i>	<i>Viscaria cardinalis.</i>

Once Heath plants have made a start, they require very little attention. Indeed, it is a fact that such subjects as these may be left for years with a minimum of labour being bestowed upon them, which is one of the strongest arguments in favour of their use in gardens. There will probably be some rough weeding to be done occasionally, stray Brambles and Gorse seedlings will need removing, and tussocks of grass must not be allowed to become established, especially among the roots of the Heaths.

Should the soil be very poor and sandy it will

help the plants considerably if a dressing of rough leaf-mould, fibrous peat, well-broken, or any decayed vegetable refuse which the compost heap can provide, is applied in spring. Any of these will serve if merely spread over the surface between the plants to a depth of a couple of inches, but if time can be spared it will pay to fork the material lightly in, taking care not to injure the roots.

It will be found that as the plants begin to cover the ground they will become more and more independent of any such attentions as those suggested. Not only will their root-systems be equal to the work of extracting moisture and nutriment from the soil in increasing and sufficient quantity, but the more the foliage spreads over the ground so much the better will it be able to check evaporation, thus rendering unnecessary any further assistance in that direction. Moreover, if there are any trees in the neighbourhood of the Heath Garden, the plants will prove themselves adepts at trapping the drifting leaves of autumn, which will gradually sink among their foliage, ultimately to be converted into humus. Only when such leaves accumulate in compressed layers on such mat-forming Heaths as *E. carnea* are they liable to be objectionable. But that is a matter which is easily remedied.

PRUNING

The pruning of Heaths is an item which, to a very great extent, may be left to the discretion of the individual. Some species, like the Tree-Heaths and *E. mediterranea*, need no pruning whatsoever.

Indeed, I have seen Heath Gardens which have not been touched with knife or shears for twenty years, and which have left little to be desired in general appearance. The fact is, pruning is not an essential with any Heaths, save when they are being grown as edgings or hedges, and to these reference has already been made. But where there is time and opportunity it is possible to keep the bushes more compact by annually removing the flowering heads and any growths which may have become ungainly. In the case of the summer-flowering kinds, notably *E. ciliaris*, *E. cinerea*, *E. Tetralix*, *E. vagans*, and *Culluna vulgaris*, this is best done in early spring, *E. h.*, *darleyensis* and *E. carnea* being treated so soon as the flowers have begun to fade.

Nothing in the nature of regular shearing or clipping should be attempted, and the knife is a much safer tool for the novice to handle than the shears. Irremediable injury may be committed by ill-guided indulgence in "trimming." Personally, I much prefer to see the shrubs growing in their own natural manner and very rarely prune any of them. Almost all the Heaths, certainly all the dwarfed kinds, are by nature shapely and elegant in habit, and they are so floriferous that no amount of pruning can make any appreciable difference in that respect. If time and labour are to be expended in fidgeting over such a matter as this, one is going to rob the enthusiastic lover of Heaths of one of his staunchest and most significant claims, which is that these shrubs are labour-savers, and that while they can take care of themselves they spare him both time and anxiety.

PESTS AND DISEASES

Few races of plants or shrubs present such a clean sheet of exemption from enemies as the Heaths. Indeed, although I have grown all the varieties obtainable for over twenty years, I have never had any losses or serious injury which could be attributed to diseases or pests. Nor can I secure evidence from any other growers whose experience has been less happy than my own. That, surely, is a recommendation which needs no comment. Even the omnivorous rabbit will not devour Heaths if it can obtain anything else; and although voles and field-mice abound with me and often work much mischief among other plants, they leave the Heaths severely alone. Rabbits will undoubtedly eat newly planted Heaths, but as a rule they do not injure established plants. The fact that rabbit-warrens are often abundantly carpeted with *E. cinerea* and other Heaths, yet almost destitute of anything else but short turf, speaks for itself.

CHAPTER VII

SPECIES AND VARIETIES

IN this and the following pages is given a brief description, in alphabetical order, of the various species, varieties, and hybrids of Heaths and Heathers now in cultivation. The scientifically inclined need not look here for anything in the way of enlightenment. My desire is merely to provide the novice with a short, descriptive account of our garden Heaths as they are known to most of us and the nurserymen. In the days of my own novitiate I know it was always a difficult task to decide what to select. Many catalogues are very helpful and explanatory, but the best of them cannot give much guidance in the space at command; wherefore, my object is to try and ease the way of the perplexed and to offer him a rather more elaborated list than that usually provided by the trade.

CALLUNA

Calluna vulgaris (Scotch Heather or Ling).— Though so familiar to every one as a wild mountain shrub, *Calluna vulgaris* can claim to be regarded as a garden subject of the utmost value. None other of the Heaths is so rich in varieties, and none pro-

vides us with forms of greater diversity and charm. The points of difference which distinguish *C. vulgaris* from the true *Ericas* have already been alluded to, and one need not be a botanist to notice at a glance the four-sided arrangement of the scale-like, soft green leaves, and the conspicuous, four-sepalled calyx which is the most gaily-coloured part of the flower in this genus.

In stature, *C. vulgaris* varies as greatly in nature as it does in the garden, being anything from two inches to three feet in height. It is normally a rather stiff, upright shrub when compared with most of the *Ericas*, but in this respect, again, it shows wide differences. In any average soil *C. vulgaris* may always be relied upon to flower profusely, and while few shrubs are more easily pleased this species undoubtedly responds to fairly liberal treatment. The flowering season may be said to extend from about mid-June to the end of summer, but even after that, and throughout the autumn and winter, the faded calyces, especially on the best white varieties, are very effective against the delicate green of the foliage.

There is only one species of *Calluna*, but its named varieties are exceedingly numerous. Indeed, I think we have too many of these, not a few being without sufficient distinction to merit special recognition. In the following list, therefore, I have included only those which seem to me to be the most worthy of garden culture.

C. v. alba—the well-known “White Heather”—is rather rigid in growth, with paler foliage than the type. It is not the best White Heath by a long

way, but worth a place for "auld acquaintance" sake. An improved form which retains the true character of the wild plant is *C. v. alba rigida*.

C. v. alba, var. *Hammondii*, is a magnificent white variety with foliage of a strong green hue, and dense spikes of pure white blossoms. This has a bold, upright growth, attaining a height of at least three feet.

C. v. alba, var. *pumila*—very dwarf and compact, is a dainty little plant, two to three inches high, for small rock-gardens.

C. v. alba, var. *Serlei*, is a beautiful White Heather that eclipses the variety *Hammondii* in the beauty of its foliage, which is a livelier green, as well as in stature and wealth of bloom. It differs from that variety in its rather more open and elegant habit and in its "feathered" branches. In my opinion this is quite the best of the White Heathers. The *rubra* variety of *Serlei*, which I have not yet tested, is said to be an autumn-flowering form similar to the above, but with rich purple flowers.

C. v. alba, var. *tenella*.—This is a medium-sized White Heath, whose very slender stems and flowering spikes often grow in a tangled, criss-cross manner, giving it a note of distinction. It appears to be synonymous with *C. v. alba*, var. *gracilis*.

C. v. Alportii.—Quite different to all other forms and at once distinguishable by its very sombre, deep-green foliage and crimson flowers. With me this variety grows about eighteen inches tall; and has a stiff, erect habit. It makes a strong contrast with any of the White Heaths, and is one of the best, and always distinctive.

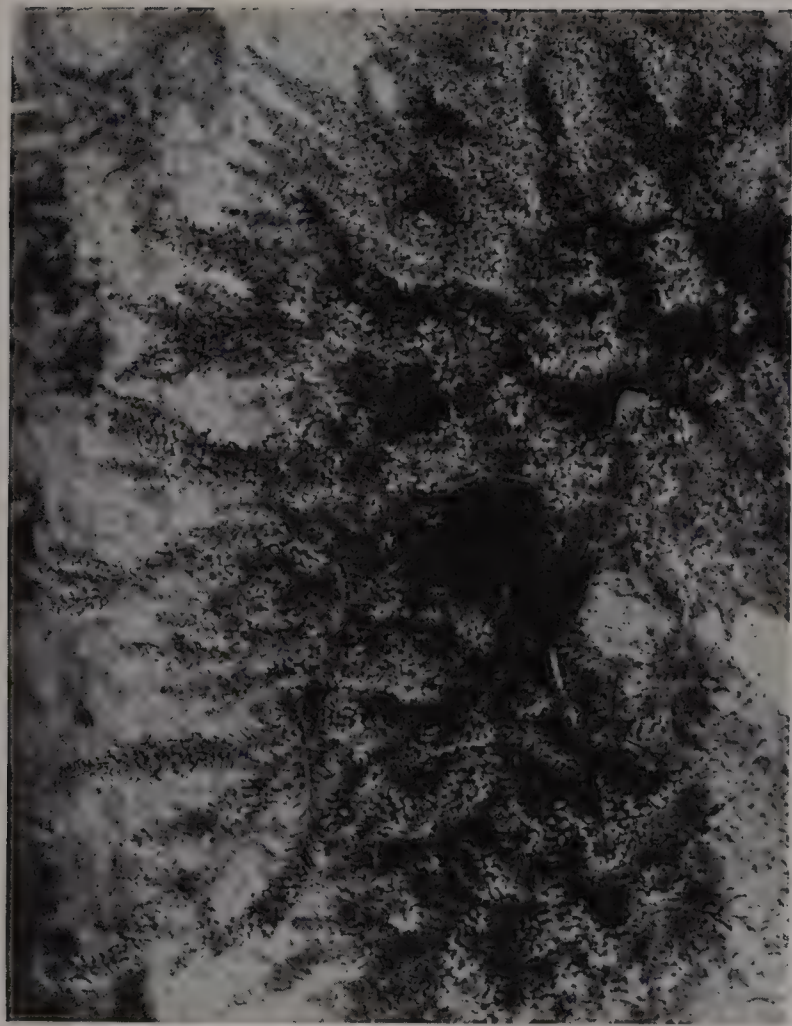
C. v. argentea.—A foliage variety, the leafage having a silvery tint, but it is not of much value. Flowers purple and few.

C. v. aurea.—As a foliage plant this is much superior to the foregoing. Indeed, it is a variety which should be grouped in every Heath Garden, for its golden leafage is distinctly pretty and effective. It does not grow to more than about one foot tall. Flowers purple, like those of the type.

C. v. coccinea.—This must be included because it is a good crimson-flowered form of medium height, the foliage being suffused with a slight glaucous hue.

C. v. cuprea.—Another foliage variety of the highest merit. A stronger grower than either of the above and of elegant, slender habit. Like *C. v. aurea*, this variety excels in autumn and winter, the foliage during those seasons being a warm, ruddy-bronze. As a flowering shrub, *C. v. cuprea* is insignificant, but its leaf colour is so delightful that it is a variety to be included in the smallest collection, and it is one of the best for edgings.

C. v. flore pleno.—Double-flowered varieties are uncommon among the Ericaceæ and by no means always attractive, but the double Ling is a really lovely shrub. It grows to about the height of an average specimen of the wild plant, say eighteen inches to two feet, but it is rather more slender in the stems, and the flowering shoots are longer and perhaps more finely tapered. When these are closely clustered with the rosette-like blossoms in a most delicate shade of soft pink suffused with lilac, there is not a prettier bush in the garden.



ERICA VAGANS VAR. MRS D. F. MAXWELL

Further, as these flowers last much longer than do those of the type, there is not only a more extended season but the spires of bloom, often nine to twelve inches long, may be seen bearing perfectly-formed, fresh flowers from base to tip. I would place the double Ling high among the very best of the Heathers.

C. v. Foxii.—A very dwarf variety, making a dense, cushiony mat of moss-green foliage, about three to four inches in height. Flowers, bright purple, sparsely produced. The plant looks as though it had been shorn or nibbled by rabbits. An interesting variety for inclusion in a collection of miniature shrubs.

C. v. Hammondii.—see *C. v. alba*, var. *Hammondii*.

C. v. minima.—Very like *C. v. Foxii*, but perhaps even dwarfer.

C. v. pygmæa.—Another cushiony variety, differing from the above in having foliage of a darker green. It is also rather taller, five to six inches; flowers purple.

C. v. Serlei.—see *C. v. alba*, var. *Serlei*.

C. v. tenuis.—Sometimes known as the "Scarlet Heather," but its flowers are a vivid crimson, ruby in the bud, tending to cerise, and yielded in remarkably full and bunchy heads. In these respects the plant is certainly distinct and very effective. The foliage is a deeper green than that of the type, the habit angular but elegant. Height, six to nine inches. A most useful variety of under average height for grouping, for the rock-garden, or for the margins of beds.

CHAPTER VIII

SPECIES AND VARIETIES (*contd.*)

ERICA

Erica arborea (the Tree Heath).—This is the tallest and noblest of the Heath family, occasionally attaining a stature of twenty-five to thirty feet in the South of England and the Scilly Islands. In gardens generally it probably does not average half that height. The habit is erect and bushy, the linear leaves, which are rather a darker green than those of its allies, being closely arranged in whorls of three. The flowers, which are almost globular, are ashen white, and produced in the greatest profusion in spring. They are delightfully fragrant. Introduced to this country from Southern Europe in 1658.

E. a., var. *alpina*.—The gardening books of a generation ago described several varieties of *E. arborea*, differing mainly in habit of growth, and evidently all geographical forms; with but little real distinction. Now we have but one distinct variety in general cultivation, namely *E. a. alpina*. This, according to Mr W. J. Bean, in *Trees and Shrubs Hardy in the British Isles*, was introduced to Kew in 1899. It is a native of the Cuenca Mountains of Spain, upon which it grows at an elevation of 4500 feet. In manner of growth this beautiful

shrub is much like the preceding, but it is rather stiffer and more erect. The dense, yet light and plumose, foliage is a rich, vivid green, and the flowers, much like those of the type, are produced a little later. Although there are specimens of this variety at Kew, and elsewhere, over seven feet or eight feet in height, six feet would seem to be the average stature. *E. a. alpina* has withstood over 20° of frost here without injury, and the above-mentioned authority relates how it passed through the very severe winter of 1908-9 at Kew without suffering the slightest harm. This variety must therefore be considered the hardiest of the group consisting of *E. arborea*, *E. lusitanica*, and *E. l. Veitchii*, and on that account it is deserving of the fullest consideration.

Erica australis (the Spanish Heath).—This most beautiful of all the taller species is one that will endure 20° of frost if grown in a warm, well-drained soil. In habit of growth *E. australis* is somewhat loose and inelegant, but it makes amends for this in possessing a singular charm of foliage and flower. The former is a full-toned, glossy green, the narrow leaves being set in whorls of four. The blossoms are so remarkable in size and colour, and so unlike those of any other Heath, that identification should present no difficulty. They are a bright rose-crimson, and borne from April to June at the tips of the previous year's growths, the cylindrical corollas, one-half inch in length, appearing in clusters of two, four, or eight. This arrangement alone is sufficient to distinguish this superb Heath from *E. mediterranea* (which a few years ago might often

have been seen bearing the former's name), whose blooms appear at the leaf axils, in terminal trusses several inches in length. These blooms are, moreover, considerably smaller and of a paler colour. Although introduced from Portugal in 1769, *E. australis* has never been other than rare in gardens. It must rank among the choicest of all shrubs, and is worthy of a place against a south or west wall in localities where it will not endure in the open. With me it has not grown taller than five feet.

E. australis, var. *Mr Robert*.—In 1912 the late Lieutenant Robert Williams, a son of Mr J. C. Williams, of Caerhays Castle, Cornwall, found growing near Algeciras a pure white form of *E. australis*. This is a singularly beautiful Heath, and similar in all respects to the type, save in the colour of the corollas. At the time of writing it is just appearing in commerce, but there is a well-established specimen at Kew, an excellent illustration of which appeared in *The Garden* for 13th October 1925. Unfortunately, Lieutenant Williams did not live to see his remarkable "find" growing in English soil, for the Great War claimed him; he was killed near Loos in the autumn of 1915. The Kew authorities named this variety "Mr Robert," in commemoration of its discoverer. It is unquestionably one of the most important additions made to the Heath family for many years, and one which will ultimately find its way to every garden in which *Ericas* are grown.

Erica carnea (the Alpine Forest Heath).—*E. carnea* is one of the most generally useful (as previous pages have shown) and beautiful of all the dwarf Heaths.



ERICA HYBRIDA VAR. DARLEYENSIS

It is a low, mat-forming species of indestructible hardiness and vigour. It makes a dense growth, covering the ground to a height of not more than about nine inches. The prostrate branches take root in any congenial soil, a good plant eventually covering a space three to four feet across. The fine, narrow leaves, usually in fours, are pale green, often with a yellowish hue. The flowers, which maintain a succession from December to April, are a bright rosy-carmine with dark purple anthers. Although these blossoms are not large individually, they are produced in such profusion in racemes at the extremities of the previous year's growths that a wonderful display of colour is produced. This colour, moreover, is afforded at a season when flowers are few, and neither frost nor boisterous weather will mar it. As the flowers have a downward inclination on the twigs, the effect is considerably enhanced when the plants are grown on a somewhat raised position. This, of course, applies to all varieties of *E. carnea*.

Regarding these latter, a large number of which are named and listed, I feel that only a few of them are of sufficient value to merit that recognition. Many seem to be too nearly alike each other, or too much like the type. The variety *alba* should stand out among them, as white forms of many Heaths do, but it is a feeble thing compared with the species and quite unworthy of it. The arrival of a really good white *E. carnea* is something to look forward to with enthusiasm.

My own choice in the named coloured varieties would include *atrorubens*, a dark crimson; *James Backhouse*, a large-flowered, late pale pink; *King*

George, probably the best early, deep rose-crimson ; *Pink Beauty*, a pretty shell-pink, very early ; *rubra*, a clear rose-pink ; and *Vivelli*, a very dwarf variety, with rich crimson-carmine flowers, and intensely dark green foliage that turns to bronze at the tips in winter. This last-named Heath is one of the most remarkable of recent introductions. It appears to have been sent out by Messrs B. Ruys, Ltd., of Dedemsvaart, Holland, and introduced to this country in 1925. In its lowly stature and the colour of its foliage and flowers *Vivelli* is quite unique among early-flowering Heaths. *Winter Beauty* is another good variety of *E. carnea*, the blossoms being a pale rosy-pink. This is perhaps the earliest of all, and is practically in flower all the winter.

E. ciliaris (the Dorset Heath).—This most distinct species, with a trailing habit, grows nine or twelve inches high, and may become two or three feet wide. *E. ciliaris* is easily distinguished by its ovate, hairy leaves set closely in whorls of three on the slender branches, their pale green tint often having a greyish, or glaucous, hue. The rosy-purple flowers, which appear towards the later summer, continuing far into autumn, are large and handsome, the pitcher-shaped bells nodding in threes and forming an erect terminal raceme of singular charm. It is one of the best of all Heaths for carpeting Azaleas and other shrubs of a kindred nature. I have found it a good grower under average conditions, but it enjoys a rather moister root run than most, and some shelter is desirable in bleak localities.

E. c. alba.—Except that its flowers are pure white

and somewhat narrower, this is in all respects like the type. Here, again, one awaits a white form which will be more worthy of the species. Even so, *E. c. alba* is a variety that should be given a place in all collections.

E. c. globosa.—A comparatively new comer, with corollas of much the same colour, but fuller and rounder than those of the type.

E. c. hybrida.—Another recent introduction, with terminal clusters of flowers and a compact habit which together suggest that *E. Tetralix* may be one parent. The colour of the blooms is a bright rose-pink. A very distinct little plant, and one that deserves to become popular among all lovers of the genus.

E. c. Maweana.—This very charming Heath was found in Portugal about fifty years ago by the late Mr George Maw, and it is remarkable that a plant of such outstanding qualities has never become more generally known. The main points of difference between it and the typical *E. ciliaris* are the more upright, shrubby habit and larger flowers, these being of a rich crimson, and in exceptionally long racemes. The foliage is also of a deeper green. This variety is excellent for growing as a single specimen, either in the rock-garden or the mixed border. It appears to be able to prosper in drier, poorer soil than one would give *E. ciliaris*, and it is perfectly hardy, despite its southern origin. The blossoming season extends from July onwards into autumn. Height about fifteen inches.

E. cinerea (the Bell Heather or Scotch Heath).—The most familiar of our natives species, *E. cinerea*,

is characterised by its symmetrical habit of growth, the slender, branching stems rising in a well-rounded mass about eighteen inches high, with a spread of anything from a few inches to a couple of feet and even more. The fine, linear leaves, usually three in a whorl, are a fresh, lively green. Appearing in June, and carrying on to September, the bright purple, egg-shaped flowers are held in upright racemes or terminal umbels, these flower spikes varying considerably in the size and number of the blossoms they carry. With this brief description of a well-known Heath I pass on to its varieties, many of which are much superior to the type from the point of view of garden value. All these have the same flowering season as in the type.

E. c. alba. *—Not quite up to expectations in a Heath so generous in the number and tints of its coloured forms. In all the whites I have seen the flowering spikes are somewhat short and comparatively few. Even so, the average white variety, with its much darker foliage, is always worthy of a place. There is a close-growing dwarf form (*minor*), which is useful for small rock-gardens.

E. c. Apple Blossom.—A very beautiful variety, with long racemes of bloom, the corollas being of good size, and of a delicate shade, perhaps best described as white, with a wash of rose-pink. An exceedingly attractive plant in flower and foliage, of neat habit and very floriferous.

* I understand that a well-known firm of Heath specialists is bringing out, in 1928, a new white variety, a true "sport," having dark green foliage and almost ebony flower stems and sepals. I am told the name will probably be Domino.



ERICA CINEREA VAR. PALLIDA, AND E. C. VAR. ATROPURPUREA

E. c. atropurpurea.—Here we have an improvement on the colouring of the type, the flowers being a brighter purple, tending to crimson. This is not a very robust grower with me, the height usually remaining well under a foot, yet the flower spikes are large and showy. A first-rate form for the rock-garden or any "close-up" position.

E. c. coccinea.—This is perhaps the most remarkable of the group, being very dwarf (six inches), with deep green foliage, and flowers of an intense blood-crimson. Not only is the blue—always so noticeable in the purple of the wild species—quite absent in the colour of the blooms, but there is in their deep, warm crimson a distinct shade of scarlet, especially just before the corollas fade. This is the only Heath known to me showing that peculiar tone. Its dwarf habit and unique colour are recommendations which render this little Heath indispensable.

E. c. Frances.—In this variety again we have a Bell-Heather of an unusual colour, its flowers being a full, warm cerise, without a trace of the native blue. It is a plant of medium size, shapely habit, and with foliage of a good bold green hue. A most useful and attractive variety either for massing or growing singly. This is one of the many new Heaths introduced (1921) within recent times by Messrs Maxwell & Beale, of the Dorset Nursery, Broadstone, Dorset, also the discoverers of Apple Blossom, which appeared a year later.

E. c. Golden Hue.—A foliage plant, the leaves being a pretty golden tint, especially in winter. The flowers are purple. Like most plants with

coloured or variegated foliage, this variety is not so robust as the typical *E. cinerea*.

E. c. pallida.—An unusual "break" from the type, the flowers being a delicate shell-pink. There is something curiously attractive about it, especially if placed well up in the Heath-garden or rock-garden, so that the tall, upright flower spikes may be on a level with the eye. In poor, dry soil *E. c. pallida* is with me unfailingly prolific in flowering, and a variety that invariably arrests attention. A delightful companion for *E. c. atropurpurea*.

E. c. rosea.—Undoubtedly the finest of its class for massing wherever a bold drift of colour is desired from about the middle of May onwards for two or three months. There are, it would appear, many forms of *E. c. rosea*, some nurserymen having their own strains, as well as their own opinions as to which is most attractive in colour. The variety favoured here has flowers of large size—quite as big as those in the most robust forms of the type—in bold and imposing spikes, their colour being a full, yet soft, rose-pink, which in some lights does not disclose more than a hint of the "offending" blue. *E. c. rosea* is in every way an admirable Heath, vigorous in constitution, an unfailing and prolific bloomer, and one that will often cover a space at least three feet across, even in the poorest and driest of soils. I should not hesitate to place *E. c. rosea* among the "best dozen" Heaths for general culture.

E. c. Victoria is another novelty that originated at the Dorset Nursery, appearing in 1923. For all practical purposes it appears, in so far as I have tested it, to be what one might describe as a robust

form of *E. c. atropurpurea*. It is a sturdier, more lusty grower than the latter, with remarkably large spikes of rich rose-purple flowers. Although one hesitates before recommending every named variety that comes out, for reasons already given, there was a place for *E. c. Victoria*, and it is distinct enough to hold it.

E. lusitanica (syn., *E. codonodes*).—In general appearance this beautiful species (the Portuguese Heath) closely resembles *E. arborea*, but it rarely exceeds twelve feet, even in favoured localities. Its very plumose foliage is also rather a fresher green than that of its ally, and the paper-white flowers, instead of being almost round as are those of *E. arborea*, are cylindrical. These blossoms, which are produced profusely on the long, moss-green, fox-tail branches from February to May, are fragrant, but they have not the rich honey scent of *E. arborea*. *E. lusitanica* will withstand 20° of frost with me, but it is not quite so hardy as the last named. It is, however, so much at home in some southern counties that it will naturalise freely by seeds. It is a shrub for rather dry, sandy, or rocky soils, drought having no effect upon it when once established. Although the blossoms are so pure a white, the pink stamens often give the flowering sprays a rosy hue. Indeed, I have seen bushes in Southern Europe, the flowers of which had the corollas also so stained with pink that the former were rosy rather than white.

E. l. Veitchii.—This is now regarded by most authorities as a hybrid between *E. arborea* and *E. lusitanica*, and it certainly betrays marked character-

istics of both those species. It is more robust in habit and growth as well as hardier than *E. lusitanica*, but the foliage more closely resembles that of the latter. The flowers are neither globular nor cylindrical, but a compromise between the two, and while they are not so fragrant as those of *E. arborea*, they are sweeter than those of the other parent. The pink colouring referred to is often more apparent in the blossoms of *E. l. Veitchii*. In my own garden this Heath is always the earliest of the group to bloom, the first flowers often expanding at Christmas time. *E. l. Veitchii* originated some twenty-five years ago at the nurseries of Messrs R. Veitch & Son, of Exeter. It is in every way as charming as the two parent species. Even if they never bloomed—which they do almost invariably with extraordinary profusion—the foliage alone of the Tree Heaths is charming enough to accord them a foremost place among evergreen shrubs.

E. Mackayi (Mackay's Heath).—Whether this is a form of *E. Tetralix*, as most authorities believe, or a hybrid, need not be discussed here. It was discovered in Connemara in 1833, but is native also of North-western Spain. It is a pretty little Heath, under one foot in height, rather more inclined to trail than *E. Tetralix*, and of a close, orderly habit. The leaves, in whorls of four, are a somewhat dull olive-green, the flowers being produced in terminal umbels as in the above-mentioned species. The corollas are rich rose-crimson, and rounder and fuller than those of most Heaths. This variety has not proved so free flowering with me as are the majority of its neighbours, but it is, nevertheless,

distinct and attractive. The double-flowered form (*flore pleno*, or *E. Crawfordii*) is precisely like the single type, except that the corollas are filled with tiny petals. These blooms, of course, last longer than the single ones, but the variety is not one that appeals to me.

E. mediterranea (the Mediterranean Heath).—Of all the taller Heaths this is the one most worthy of general planting, for it is undoubtedly hardier than any of the Tree Heaths alluded to, and there are few places where it will not succeed, and succeed well. It is, moreover, an exceedingly showy species, producing masses of colour from March to May. Attaining a stature of from five to ten feet, according to locality, *E. mediterranea* is an admirable Heath for planting in bold stretches (as seen at Kew), for beds, or for grouping in open woodland. It is by no means fastidious as regards soil, prospering in thin, poor loam or rich peaty land with equal goodwill. The Mediterranean Heath may be distinguished by its dark-green, linear leaves (in whorls of four) in the axils of which the flowers appear, these making upright racemes several inches in length on the growths of the previous year. The blossoms, about one-quarter inch in length, are rosy-crimson, the dark red anthers affording the trusses a purple hue. These blooms are deliciously fragrant, a honey-like odour pervading the air round about the shrubs every warm spring day. *E. mediterranea* is without question the finest of all spring-flowering Heaths, and one that deserves a much wider popularity than it has yet attained in gardens generally.

E. m. alba.—As the type species stands alone among spring Heaths of its own colour, so does its white variety hold an unrivalled position in the dwarfer kinds of its season. It is a good deal lower in stature than the former, and its foliage is rather a darker green. But the flower trusses which are yielded with such splendid generosity are quite as large as those of the type and of a lovely pure white. This is in every way an admirable Heath, and one that must be numbered among the indispensables in any collection.

E. m. hibernica (syn., *glauca*).—An Irish form of *E. mediterranea*, notable for the glaucous tint of its foliage, this being as attractive in winter as at other seasons. It is not so tall (two to four feet) as the type, nor does it bloom with such freedom, but it is worth a place nevertheless, since it is distinct and not without a refined beauty of its own.

E. m. hibernica var. *Brightness*.—This also hails from Ireland, and is a peculiarly attractive little shrub. Not growing to more than half the height of the preceding, and being close and shapely in habit, with flowers of an unusually vivid rose-pink, it can always be distinguished among its sister varieties. The foliage is also a deeper green than that of most kinds of *E. mediterranea*, and the buds, before opening, are ruby-red.

E. m. hybrida (see *E. h. darleyensis*).

E. m. nana.—The midget of the family ; a useful rock-garden or front-row shrublet of neat habit, and not more than twelve to eighteen inches in height.

E. m. superba.—A selected form of the typical *E. mediterranea*, with denser foliage of rather a deeper

green and immense trusses of bloom. The blossoms are sometimes produced with such generosity in this Heath that the leafage is almost hidden from view. Perhaps the best of this class for growing as a specimen plant in lawn or border.

E. multiflora (the Many-Flowered Heath).—This species does not appear to be in cultivation in this country, outside botanic gardens, such as Kew. It is closely allied to *E. vagans*, but differs from that species in certain botanical features, as well as in its lesser stature, stiffer, more upright growth, and shorter flower racemes. The flowers are pale lilac and comparatively poor, in spite of its name. In Southern France, east of Marseilles, I have seen *E. multiflora* in quantity on most arid hillsides and those of limestone formation, which suggests that it might be useful for similar places in England. It does not appear to grow to more than about eighteen inches high.

E. scoparia (the Besom Heath).—This is not a species of any garden merit, the flowers being green and the habit loose, thin, and ungainly. But its prostrate form (*pumila*, or *nana*) might well be employed for carpeting rocky places in open woodland, or dry hot slopes, in much the same way as some Junipers are used. Its foliage is a glossy, lively green, and the shrub is a good drought resister.

E. stricta (the Corsican Heath).—Although introduced from South-western Europe in 1765, this species is still rather uncommon in gardens. This is the more surprising considering how valuable it is for late flowering, and how distinct and handsome

it proves to be at all seasons. It is, moreover, quite hardy. *E. stricta* is a shrub of some six to eight feet in height, the habit being upright and somewhat rigid, especially when old. The leaves, in whorls of four to six, are a peculiarly pleasing shade of moss-green, and as they stand out from the twigs and branches, they impart to these a curiously "fuzzy," or bristly, appearance. The flowers, which appear in terminal clusters in July, are cylindrical and a clear rose-pink. Their season extends well into autumn, and when they are over the faded corollas, having turned a bright rusty-red, will be conspicuous and very charming features of one's winter garden. *E. stricta* is a shrub which should be seen more often. To the practical uses to which it may be put I have referred elsewhere.

E. Tetralix (the Cross-leaved Heath).—This well-known moorland shrub is, as many must have observed, of great variability both in regard to stature and the colour of its flowers. Generally speaking, it is ten to fifteen inches high, the habit being lax and spreading, yet always compact and shapely. The leaves, set in fours, cross-wise, as the name suggests, are a full green, with paler, often white, underparts. All are to some extent pubescent, or downy, but in some forms they are so much so that the foliage has a silvery-grey tint, especially towards the ends of the twigs. The terminal flower clusters are composed of from four to eight, or more, blooms, the waxen corollas being roundly cylindrical, very contracted at the mouth, and of a bright rose-pink. But the colour, as I have suggested, varies very considerably. Although



ERICA TETRALIX VAR. MOLLIS

naturally fond of rather damper, more peaty places than other common, moorland Heaths, *E. Tetralix* is very amenable to garden culture, and I have it growing well in loams of various degrees of dryness.

E. T. alba.—This variety is similar to the type in all but the colour of the flowers, which are a pure white. Good forms of *E. T. alba* are decidedly attractive, and anyone within reach of a moor where the plant abounds may often find specimens of first-rate quality. The greyish foliage and snow-white flower clusters are very appealing, especially in small plants, and these are admirable in the rock-garden.

E. T. Lawsoniana.—Whether this is a form of *E. Tetralix* or not appears to be doubtful; at any rate I am following the general custom, and including it under that species. It is, as I know it, a very compact grower, producing a large number of slender twigs up to six inches high, these forming a close mound of silvery-grey foliage, which, from the end of May, for two months or longer, is adorned with flesh-pink flowers. These latter appear in terminal clusters, as in *E. Tetralix*.

E. T. mollis.—The only difference between this form and the type is in the foliage which, being more pubescent, is almost silvery.

E. T. Ruby's Variety.—In this variety, which emanated from the Dorset Nurseries, the flowers are white with a purple lip. A distinct and very pleasing Heath, and one that might have a worse companion than *E. T. Rufus*, with blossoms of a rich crimson-pink.

E. vagans (the Cornish Heath).—This is the

largest of our native Heaths. Although it does not often exceed three feet, it will easily make a rounded elegant bush of fully four feet to five feet in diameter. The linear leaves, arranged in whorls of four or five, are a fresh, glossy green, and the pale, lilac flowers, which are yielded in abundance from the later summer into autumn, are packed in crowded terminal racemes. The corollas are almost globular. I have found *E. vagans* an excellent Heath for poor, gravelly banks, and rarely has it suffered from drought under such conditions. I think it flowers more profusely and maintains a more shrubby, neat habit than when in richer, moister ground.

E. v. alba.—This old form, an indifferent white, has been totally eclipsed by the new variety, *Lyonesse, q.v.*

E. v. carnea.—A pretty variety of very close growth, more dwarf than the type and with bright pink flowers.

E. v. grandiflora.—The true *grandiflora* is a robust grower, fully as large as the type species, excelling in the length of its flower spikes. These are often eight inches long, and of a rich pink, tending to purple. This form is apt to get straggly with age, a fault that is easily remedied by spring pruning. *E. v. rubra* comes near to this, but its flowers are of a darker purple and the spikes are not so long.

E. v. Lyonesse.—This is without a doubt the finest white variety of *E. vagans*, and one of the best of all white Heaths. It was found by Messrs Maxwell & Beale in the Lizard district of Cornwall, and first listed by that firm in 1925. The foliage

appears to be of a fuller, glossier green than in most other varieties, and the flowers, in very large spikes, are a really pure snow-white. The anthers are of a paler brown than those of other forms. *E. v. Lyonesse* undoubtedly marks one of the most important stages in recent Heath culture, a plant of splendid vigour and one that will attract admiration in any collection.

E. v. Mrs D. F. Maxwell.—This lovely variety emanated from the same source as the above, and at the same time. It is a Cornish Heath of the highest merit, rivalling the famous *St Keverne* in the robustness of its growth, the dark green foliage and large size of the flower spikes. But the latter are of a colour that is all their own. Mr Maxwell is near the mark when he describes this variety as having “deep cerise flowers, rather the colour of *Potentilla Miss Willmott*.” The shade of colour is singularly soft and appealing and without a hint of blue. An excellent variety in every way, and quite unlike any other Heath. At the Holland Park Show of the Royal Horticultural Society on 22nd September 1925, the Floral Committee, by a unanimous vote, accorded this Heath an Award of Merit.

E. v. St Keverne.—One of the most beautiful Heaths in cultivation, and a variety which has always been outstanding on account of that unmistakable “quality” which distinguishes it. This singularly handsome Heath was discovered in Cornwall by Mr P. D. Williams, of Lanarth, *St Keverne*, some years ago, and though many forms of somewhat similar character have since been found none have thus far rivalled the original. I

should not like to say that it is finer than the above mentioned, for it is different. In vigour and foliage it is undoubtedly close to the variety Mrs D. F. Maxwell, but the large flower trusses are a clear rose-pink, bright and generous in tone, without a shade of blue. No collection of Heaths, however small, can afford to be without St Keverne.

SOME NOTABLE HYBRIDS

E. hybrida darleyensis (syn., *E. mediterranea hybrida*).—There is no more valuable Heath than this, for it has not only a great charm of its own in flower and foliage, but it commences to bloom in November, and continues until spring. Thus it comes to bridge what would otherwise have been a gap in the yearly cycle of the Heaths, that is, the period between the last of the autumn bloomers and the earliest of the winter-spring varieties. In a shrub that is reputed to be a hybrid (it arose as a seedling at the Darley Dale Nurseries of Messrs James Smith & Son), between such meritorious species as *E. carnea* and *E. mediterranea*, one might be led to expect something of exceptional quality, and *E. darleyensis* does not disappoint. In general features it may be said to inherit the main characteristics of both the above-named species. It makes a bushy shrub some two feet tall, the foliage being of rather a darker green than that of *E. carnea*. The pale rose-purple flowers, which are produced in ample, terminal racemes, are of brighter hue than those of either of its reputed parents, although they have much in common with them.



DABŒCIA POLIFOLIA VAR. ALBA

Undoubtedly hardy anywhere, *E. darleyensis* may be planted with confidence as a mid-winter flowering Heath for all districts, and, I might add, for all purposes. Even the blossoms appear to be immune to frost; and it matters little whether the soil be dry and poor, or moist and peaty, *E. darleyensis* will prosper if any Heath will. Another point in its favour is that although a fairly tall grower, it will bloom freely when no more than two to three inches high.

E. h. Dawn.—A remarkably lovely (*E. ciliaris* × *E. Tetralix*) hybrid, notable for its neat habit of growth, dwarf stature (eight inches), and prolificacy in flowering. Although the blooms, as well as the foliage, are much like those of *E. ciliaris* in size and shape, the corollas are of richer colour, and appear in clusters at the tips of the branches, as in *E. Tetralix*. The flowering season extends from July to November. One of the best of its class.

E. h. H. Maxwell, of the same origin, is much like the foregoing, but the flowers are clear pink. Both plants are especially suitable for moist soils.

E. h. Maweana, see *E. ciliaris* Maweana.

E. h. Stuartii.—This Heath is often regarded as a natural hybrid from *E. Mackayi* × *E. mediterranea*, but in the arrangement of its flowers at the ends of the branches, if not in other features, it suggests *E. Tetralix*. However that may be, *E. h. Stuartii*, with its dark green, glossy foliage and shell-pink flowers, conspicuously tipped with rose-madder at their very contracted lips, is an engaging little shrub, distinct enough and pretty enough for any collection. Height about one foot. It was

discovered in Ireland (Western Galway) some thirty years ago. A good grower under any average conditions, but not a free bloomer with me.

E. h. Watsonii.—A natural hybrid between *E. ciliaris* and *E. Tetralix*, found near Truro by Mr H. C. Watson. This is a very charming Heath, inheriting some of the principal features of each parent. Its rosy-crimson flowers, which resemble those of *E. ciliaris*, are arranged, not in the long racemes of that species, but in the flatter, terminal, umbels of *E. Tetralix*. The leaves are narrow and disposed in whorls of four, as in the last-named Heath, yet the foliage has a certain resemblance (perhaps in its slightly glaucous tint) to the other parent. The habit is compact and shapely, and the height nine inches, with a spread of about eighteen to twenty inches. It blooms throughout the later summer and autumn.

E. h. Williamsiana.—This comparatively new Heath was found near the Lizard by Mr P. D. Williams, and it is believed to be a natural hybrid between *E. vagans* and *E. Tetralix*. The foliage certainly suggests an affinity with the former, and there are botanical features which point to the latter. I find *E. h. Williamsiana* a bright green, close, shrubby plant of eight to twelve inches, the rose-pink flowers appearing at the tips of the twigs during late summer. But, so far, this Heath has not flowered at all freely in my garden. Since the discovery of this hybrid Mr Williams tells me that his daughter found one other of similar parentage, about a mile from the original plant.

CHAPTER IX

SOME ALLIED SHRUBS

AMONG the *Ericaceæ* there are many shrubs which are admirable subjects for associating with Heaths. Not only do they prosper under similar conditions, but in habit, foliage, and flower they harmonise happily with them, and do much to enhance the beauty and interest of the Heath garden. The following is a selection of subjects I have found most satisfactory among those of dwarf to medium height suitable for the purpose in view. All dislike lime, save where otherwise stated.

Andromeda polifolia (the Bog Rosemary).—Although not showy, this native plant is useful for moist places, and there is a curious charm in its narrow foliage and clusters of pink bells in spring. It grows about eighteen inches high, and may be associated with *Ericas* of the *Tetralix* class, which flower later and also delight in a damp root-run of peaty soil.

Arctostaphylos Uva-ursi (the Red Bearberry).—A delightful, trailing shrub for any soil that is not too dry and hot. The leathery, glossy, deep green leaves, reddish stems and clusters of rose-pink flowers (April to June) are always attractive. There is nothing better of its kind for draping cool, rocky banks or old stumps, and for covering the

ground under trees where the shade is not too dense. A native of northern latitudes, including Britain, it is perfectly hardy. The plants sent out as "*A. nevadensis*" and "*A. californica*," Mr Bean considers to be only Western American forms of this species.

Azalea, see *Rhododendron*.

Bruckenthalia spiculifolia.—There are few more beautiful little shrubs than this, but although quite hardy and easy to grow in any well-drained loam and leaf-mould, it is seldom seen in gardens. A native of high altitudes in Eastern Europe, *B. spiculifolia* was introduced about forty years ago, and few who have ever grown it would willingly be without it. It is a dwarf evergreen, making a mound of close-set, Heath-like foliage about four inches high and of a bright healthy green. The flowers, which are—unlike those of most Ericaceous plants—wide open, after the style of those of an *Azalea* in miniature, appear in terminal racemes about mid-summer. In colour they are a delicate pink, and a plant in full bloom is singularly pretty. Being of lowly growth, this is obviously a subject for planting where it may be seen readily. For the cool side of the rock-garden it is first-rate, but it needs sun. It may be propagated as advised for Heaths.

Cassandra calyculata (Leather Leaf).—A hardy, North American evergreen shrub, some three feet high, with obovate, alternate leaves about one inch long and half as wide, and fresh glossy green. The urn-shaped, white flowers appear at the leaf-axils towards the ends of the rather rigid, sparse branches.



LEIOPHYLLUM BUXIFOLIUM

This shrub does well in any moist, free loam, and it is one that will not go unobserved when in flower, even by those who have not any special regard for the Ericaceous family. The smaller, more shapely variety, *C. c. nana*, is in many respects an even better garden subject. (Syn., *Andromeda calyculata*.)

Cassiope tetragona (the Lapland Heath).—Most people know this little northerner, with its sheaf of upright twigs, each encased in its overlapping, bright green leaves, the whole suggesting some dwarf, shrubby *Veronica*. It is a dainty and appealing shrublet for a cool soil containing plenty of humus. The white, bell-shaped flowers appear on the green branches in spring. There are other species, but this is probably the easiest to grow; it is also known under the name of *Andromeda tetragona*.

Dabæcia polifolia (St Dabeoc's Heath).—There is no more precious shrub in the whole range of the more Heath-like Ericaceous subjects than this one, and none is more beautiful. Indeed, it would not be straining a point to affirm that *D. polifolia* might claim a high place among all flowering shrubs. It is a native of parts of Spain and South-western Ireland, but is quite hardy enough for almost any of our counties. With me it does splendidly in a light, gritty loam, often on extremely dry banks, and it rarely suffers from drought. But it undoubtedly appreciates leaf-mould or a modicum of peat. Growing to about two feet high, *D. polifolia* has a distinctly Heath-like appearance, but the glossy, dark green leaves are longer and broader than in any of the *Ericas*, and have white under-

parts. The flowers, which are yielded in extraordinary abundance from late spring until the first frosts of autumn, are borne in upright, terminal racemes often six inches or seven inches in length. In the typical form these blooms are egg-shaped, about half an inch long, and of a pleasing shade of rose-purple. The only attention my plants ever get is an annual pruning, consisting of snipping off in winter or spring the old spikes, with about an inch of the wood below them. *D. polifolia* is a long-lived shrub, carrying on for many years without losing vigour or shapeliness. Propagation is effected by methods as advised for *Ericas*. (Syn., *Menziesia polifolia*.)

D. p. alba.—Good as the foregoing undoubtedly is, even it must give place to its white form, perhaps the loveliest of all the Heath-like Ericaceous shrubs. This priceless gem was discovered in Connemara in 1820, and it has remained unrivalled, one of the most singularly beautiful objects of our summer-autumn gardens, ever since. It differs from the type not only in having leafage of a rather darker green, but its flowers are a good deal larger, more globular, and they are borne on stately spires which are frequently nine to twelve inches in length. As a matter of fact this white variety is with me more robust in every respect than the type, growing rather taller and bushier, and being more floriferous. It often opens its first flowers in early May, and from that time onwards to December it will bear an unbroken succession of bloom with the utmost liberality.

D. p. atropurpurea.—This variety differs from the type in its flowers, which, as the name suggests, are

of a richer colour. In this respect the plant is distinct enough to merit recognition, and where space is a consideration, it may be planted instead of the type.

D. p. bicolor (versicolor).—More curious than beautiful, this variety bears purple, white, and pink and white flowers, all on the same plant.

Enkianthus cernuus.—Of the several members of this genus there is, I think, none more suitable for the average Heath garden. It is a Japanese species, some four feet or more in height, with slender, angular branches, and pale green leaves about one inch long and half as wide. The flowers appear in clusters in May, the nodding, bell-shaped corollas being an indistinct white. The foliage is deciduous, and the very brilliant crimson tints assumed by the leaves before they fall are enough to win a place for this shrub. *E. c. rubens*, which has crimson-scarlet flowers, is much superior to the type, but is apparently still very rare.

Gaultheria.—One of the best Gaultherias for growing with Heaths, where there is ample space, is *G. Shallon*. This shrub may be very effective as a break in the Heath garden, its large leaves and bold habit often being useful as a direct contrast to the foliage of the Ericas. Nor should it be overlooked as a flowering subject. The racemes of pinky-white, egg-shaped blossoms are singularly pretty, and are followed by purple, edible berries. But as *G. Shallon* is apt to run underground, though it does not spread rapidly, care is needed in regard to its position. *G. Veitchiana*, and the closely allied *G. Hookeri*, only growing to about one foot

high, are both suitable, but they need rather more moisture than *G. Shallon*, which will grow anywhere.

Kalmia glauca.—The smallest of its lovely race and one of the most comely of dwarf, flowering shrubs. An excellent subject for growing in any fairly cool, moist loam, with leaf-mould, or in peat. In height it does not exceed two feet, and the habit is erect and neat. The narrow leaves are deep green, with white underparts, and the flowers, borne in upstanding clusters at the tips of the twigs in spring, are saucer-shaped and of a clear rose-purple. In its native North America, *K. glauca* is often found growing in shallow water at the margin of mountain lakes.

Ledum latifolium (Labrador Tea).—Anyone having soil largely composed of decayed vegetable matter, and cool enough for the foregoing and the moisture-loving Heaths, will find this *Ledum* an engaging little shrub. It is evergreen, does not often exceed two feet in height, and produces its terminal corymbs of white flowers in the late spring. The under parts of the green, heart-shaped leaves are covered with a brown felt.

Leiophyllum buxifolium (Sand Myrtle).—A delightful little evergreen shrub, about one foot in height, making a neat, well-rounded bush, which is charming at all seasons. The habit is dense, and the small leaves which throng the slender twigs are oval in shape and dark glossy green. In May, the foliage becomes studded with innumerable buds of a bright rosy tint, these breaking into a mass of flowers which almost smother the foliage with their crystal whiteness. This delightful little shrub does

well with me in ordinary well-drained loam, such as most of the Heaths enjoy, and it never fails to secure admiration. A native of North America, and introduced nearly two centuries ago. Quite hardy.

Pernettya (Prickly Heath). — Few Ericaceous shrubs of such merit have been so overlooked by gardeners in general as the *P. mucronata* "hybrids." These are most desirable subjects for grouping in conjunction with Heaths, their wonderful berries affording a rich and varied display of colour at a time when the Heath garden is comparatively flowerless. Although they differ somewhat in stature, these "hybrid" *Pernettyas* make shapely bushes about three feet in height. Their thin, wiry branches are furnished with hard, sharp-pointed, small, ovate leaves of a deep, shining green. The white, bowl-shaped blossoms which appear in spring are followed by the berries, these colouring in early autumn. Borne singly or in clusters, these fruits vary in dimensions from those the size of a Pea to the largest, which may be half an inch across. Nor do they show any less diversity in their colour, for a good group of mixed *Pernettyas* will yield berries of blood crimson, purple, pink, lilac, violet, and many intermediate shades, and there is a lovely pure white variety. These berries, moreover, will remain on the bushes throughout the autumn and winter. Birds never seem to touch them. In my own garden these *Pernettyas* thrive and fruit well in any average loam, often in very dry places. They never ask any attention, yet they are always shapely, healthy and pleasant. Propagation is easily achieved by detaching offsets or suckers.

They are among the few Ericaceous shrubs which, it is said, will succeed in a calcareous soil.

Phyllodoce empetriformis.—This is not only the most easily grown, but the most beautiful member of its genus. It has, in general appearance, a close resemblance to the Heaths, making a semi-prostrate bush about nine inches in height, the linear leaves with which the branches are closely furnished being of a bright, cheerful green. The large pitcher-shaped blossoms, appearing at the leaf axils towards the tips of the twigs in spring, are borne on long, erect stalks, the corollas being bright rose-purple. A native of Western North America, *P. empetriformis* is quite hardy, and I find it most amenable to culture in any free loam that does not get too dry. An occasional top-dressing of leaf-mould and sand is highly beneficial. *P. empetriformis* associates admirably with dwarf Ericas and Callunas, and a shrub of such singular beauty should always have a place in every garden where similar subjects are grown. (Syns., *Bryanthus empetriformis* and *Menziesia empetriformis*.)

Phyllothamnus erectus.—An evergreen bushling about nine inches in height, with the bright green, linear leaves of the *Phyllodoce*, and a shrubby, erect habit. This is reputed to be a hybrid between *Rhodothamnus Chamæcistus* and *Phyllodoce cærulea*, but it bears a much closer resemblance to *P. empetriformis* than to the latter. It is a hardy, most charming little shrub, one of the choicest of its race, and by no means difficult to grow if given a root run of cool loam and leaf-mould. The flowers appear in April, in clusters, at the tips of the branches,

but instead of being more or less urn-shaped, as are those of so many Ericaceous plants of this nature, they are wide-open, five-lobed, and suggestive of some tiny Azalea. In colour they are a fresh, clear rose-pink. (Syn., *Bryanthus erectus*.)

Pieris floribunda.—Where space permits, a good group of this charming evergreen may be remarkably effective if happily placed among the taller Heaths. The rich green of its foliage is always pleasing, but especially so in winter, when the shrubs put forth their cheerful cockades of white, pendulous blossoms. Although *P. floribunda* will grow to five feet or six feet in height, it is usually considerably less than that, and the habit is spreading and dense. It is quite hardy. (Syn., *Andromeda floribunda*.)

Rhododendron (Azalea) amœnum.—A small-leaved, evergreen bush, about three feet high, bearing, in spring, multitudes of crimson flowers about half an inch across. A most cheerful and showy little shrub, and one of easy culture and the utmost reliability. *R. a. japonicum*, also delightful, is similar but smaller in growth. Both of these are first-rate for grouping in association with Heaths.

R. ferrugineum (Rose of the Alps).—I have found this species very useful in the Heath garden. It makes a low (two to three feet) compact mass of dull green foliage, tinted with rusty brown, and yields, in early summer, terminal trusses of small, rose-crimson flowers. There are several varieties, including a white.

R. glaucum.—A very attractive species, making a neatly-rounded bush, about three feet tall, with

a wider spread. The oval, leathery, pale green leaves are glaucous beneath, and the flowers, appearing in terminal clusters in May, are about one inch across, bell-shaped, nodding, apple-blossom-pink and white.

R. hirsutum.—Much like *R. ferrugineum*, but rather smaller in all its parts. The leaves are hairy at the margins. Said to do well in limy soil.

R. molle (*Azalea mollis*).—It is a matter of opinion and taste whether the large-flowered and gaily-coloured Azaleas of this section are appropriate companions for Heaths. I consider they are out of place, unless the area is large and much care is exercised in the choice of colour and positions assigned to them.

R. præcox.—One of the best of all early-flowering dwarf hybrids, this *R. ciliatum* × *R. dauricum* hybrid is a shrub of the utmost value in the Heath garden. It is semi-deciduous, about four feet in height, and a most reliable and abundant bloomer. The flowers which adorn the bushes during March and April are of that delicate shade of bluish rose-purple which is always so attractive in woodland or among any green surrounding. The colour, in point of fact, is almost exactly that of *Calluna vulgaris*, and a group of *R. præcox* will, at a little distance, give the same alluring tone that one associates with the Heathery moor. Moreover, being such an early bloomer, this *Rhododendron* will afford brightness and colour to the Heath garden long before most of its occupants are in flower.

R. punctatum.—This American evergreen species (about four feet) may be very charming in the Heath garden, especially on a bank or among rocks,



GENISTA CINEREA

Cardetia

where its slender branches may trail downwards and display their natural elegance. The blooms which adorn the rich, glossy green foliage in the late spring are borne in neat trusses, the corollas, rather over one inch in width, being a bright rose-purple, which blends very happily with the foliage and flowers of most Heaths. This species is one of the parents of three dwarf hybrids of much charm, viz., *R. arbutifolium*, *R. myrtilifolium*, and *R. Wilsoni*. All of them are highly desirable, little, evergreen shrubs with flowers much like those of the above, and foliage in pleasing shades of glossy green. Like *R. punctatum*, these are perfectly happy in a free loam. I think *R. Wilsoni* is the best of the trio.

R. racemosum.—An ideal Rhododendron for grouping with any of the dwarfer Heaths. It is quite hardy, very reliable and easy, evergreen, and a prolific bloomer. Unlike those of most of its race, *R. racemosum* produces its flowers from the leaf axils, several inches of the ends of the upright twigs being crowded with the pretty pink blooms. There are many forms of this useful little shrub, varying chiefly in the colour and size of their flowers: *R. oleifolium* (of the trade lists) is one of these.

R. Rhodora.—Although deciduous, this pretty shrublet of North America is well deserving of a place, and that a good one, in any collection of dwarf Ericaceous plants. It grows to three feet high, and in early spring the thin, leafless twigs are adorned by numbers of dainty, lavender-purple flowers, which, with their long protruding stamens, are suggestive of Honeysuckle blossoms. Though it enjoys a moist soil, *R. Rhodora* is not fastidious, and will prosper in any

average loam that does not get too dry in summer. An admirable companion plant for *E. Tetralix* and its near allies. (Syn., *Rhodora canadensis*.)

R. viscosum.—Much like the foregoing in habit and requirements, this North American Swamp-Honeysuckle is taller and bushier. Although a slow grower, it will attain a height of eight feet, but it is more often seen about half that stature. It is a deciduous species, the exquisite pink and white flowers which appear in June are deliciously fragrant and yielded with the greatest freedom. *R. viscosum* will succeed in any average loam, but it is happier in a fairly moist root run of vegetable soil. This shrub is most useful for preventing any tendency to a flat uniformity that one may get in plantings of the moisture-loving Heaths.

There are, of course, many more Rhododendrons (including Azaleas) suitable for growing in the company of Heaths. I have merely alluded to a few by way of affording the beginner some guidance as to what he may plant safely. Many of the Japanese Azaleas, the single and double-flowered *Ghent* varieties, those of the *A. rustica flore pleno* class, and the *Kurume* varieties alone afford an infinite choice in colours, sizes, and habits. In addition to these there is now available at reasonable prices a number of those dwarf Rhododendrons usually catalogued for the rock-garden. These have their uses also in the Heath garden, and I know of nothing prettier than groups of such species as *R. fastigiatum*, *R. hippophæoides*, *R. impeditum*, and *R. intricatum*, in various shades of lavender and purple, among the dwarfer Heaths.

Zenobia speciosa.—This is the most beautiful of the so-called “Andromedas.” It is a shrub of about four feet in height, of slender, rather loose habit, and it bears in early summer drooping clusters of Lily-of-the-valley flowers. The variety, *Z. s. pulverulenta* is even more attractive by reason of the blue-white bloom with which its foliage is covered, and it is a more prolific bloomer. These, again, might well be associated with any of the smaller Heaths which delight in a moist, peaty soil, but they often do very well in an average loam.

CHAPTER X

TREES AND SHRUBS FOR HEATH GARDENS

ALTHOUGH the Ericaceous shrubs referred to in the preceding chapter are so well suited by nature and habit for cultivation with Heaths, there are not a few others belonging to quite different genera which are no less useful and no less happily in accord with the Heath family.

What, for example, is more beautiful than the dwarf Furze (*Ulex nanus*), when it weaves its gold into the purple of our northern autumn moors? Is there anyone "with soul so dead," whose senses are not touched by a vision of some sun-bathed hillside of South-western England, what time the yellower gold of *U. Gallii* is adding its lustre to the parting glories of the Heaths among which it dwells? Here, indeed, nature is once again a finger-post pointing the way that we—in our gardens—should go, and no one who has a Heath plantation of any size can afford to ignore the unique charm of these two autumn-flowering Whins.

And just as the above will lend that priceless touch of gold to the later months, so we shall find that there are closely allied shrubs which are no less precious for earlier days. I refer to *Genista hispanica*, than which there is nothing among dwarf shrubs that will give so glorious a display of golden-

yellow during May and June—nothing that will blend more harmoniously with the dwarfer Heaths, especially where there are out-cropping rocks, or other elevated positions, which it may share with such as *Erica cinerea*. For associating with the still dwarfer varieties of that Heath in similar places we have the pretty little *G. dalmatica*, *G. pilosa*, *G. sagittalis*, and *G. radiata*. And for rambling among its Ericaceous companions, as it does on some of our moors, *G. anglica* is not to be overlooked by those who delight in creating a natural effect. *G. germanica*, closely allied to *G. hispanica*, although inferior in garden value, has its place to fill since it comes a little later, and for the last of all there is *G. tinctoria*. The best forms of this last-mentioned native are the compact, low-growing, double-flowered variety (*flore pleno*), var. *elatior*, a three to five feet shrub of upright habit, and var. *mantica*, which will often flower well-nigh throughout the season, its brassy-gold having a telling background in the glossy, dark-green foliage.

Where space permits the planting of larger shrubs, often so helpful in forming a background, *Genista cinerea* and *G. virgata* are recommended no less heartily than that wonderful shrub, the double-flowered Gorse (*Ulex europæus*, fl. pl.). The Brooms also afford an admirable selection in subjects of about the same height. *Cytisus scoparius* itself, as well as its vars. *pendulus* and *sulphureus* (Moon-light) and the late-flowering form of the type, are all first-rate. There are often opportunities where some of the many forms of *C. s. Andreanus* may be planted with good effect, but care is needed with their

purples and crimsons among Heaths flowering in early summer.

Among Brooms of less than medium stature, *C. purgans* is invaluable, a delightful species to which *C. præcox* owes its fragrance and much of its charm. The White Broom (*C. albus*) is, in its own way, without a peer, and I have grown it in conjunction with many dwarf Heaths with the most satisfying results. Then, among the lesser Brooms, for use as has been suggested among rocks or along the margins of paths, there are such excellent kinds as *C. Ardoini*, *C. Beani*, *C. kewensis*, *C. decumbens*, and *C. hirsutus*, all of them easily-grown little shrubs for any dry, sunny place. And in this genus, also, there is *C. nigricans*, an autumn bloomer of medium stature, whose waving plumes of lemon-yellow are always a delight.

Fabiana imbricata is a first-rate shrub for the present purpose, for it has Heath-like foliage, and its long spikes of white tubular blossoms in June can never be other than charming in the company of Heaths. Though not hardy everywhere, *F. imbricata* should be given a fair trial in every garden that can afford it reasonable winter shelter. It will thrive in any soil suitable to the *Ericas* generally.

The Lavenders and Rosemary are not shrubs which, on first thought, might be deemed suitable for growing in conjunction with the Heaths. But when it is realised that they are often seen sharing hill-slopes of Southern Europe with several of the Tree Heaths and other species which love a dry warm soil, the matter assumes quite a different aspect. Both the foliage and the colour of the

flowers in these sweet, old-time plants blend most sympathetically with Heaths.

Where climate and soil permit the cultivation of the foregoing subjects, the Grevilleas may be tried. These are fine-leaved, evergreen shrubs which are never out of place among the Ericas. *G. rosmarinifolia* and *G. sulphurea*, the former with crimson and the latter with yellow flowers, will make graceful, bushy shrubs up to five feet in height. They will succeed admirably in any soil in which the taller Heaths thrive, and few subjects make more suitable companions for the latter than they do. Although natives of Australia, the Grevilleas are undoubtedly hardier than is generally supposed. They have often been subjected to 20° of frost without injury.

For cooler soils, whether peat or loam, the Vacciniums offer a variety of species of which the Heath-grower may make good use. *V. corymbosum*, a deciduous, thin-habited plant of middle height, is one of the highest merit, its pale pink blossoms being followed by blue fruits. This hardy, easily grown species is well worth a place if only for the splendour of its autumn tints. *V. glauco-album* is a three-feet, evergreen species notable for the beautiful bluish-white bloom which covers the undersides of its large leaves, the fruit, and the conspicuous bracts which accompany the rosy flowers. Unfortunately, this fine species is not quite hardy. *V. Mortinia* is another attractive evergreen species of the same height, and among dwarfer kinds recommended are the well-known *V. Vitis-Idæa*, our native Cowberry, and *V. intermedium*.

Pachystima Canbyi is a pleasing little, narrow-

leaved evergreen for a cool soil, its habit being round and neat; and no less may be stated of *Euonymus nanus*, a dwarf Spindle-tree which bears the brilliant pink and orange fruits of the family. A place might also be found for our own *E. europæus*, a shrub of such sparse habit that it need not interfere unduly with any of the Heaths. I must here confess my affection for another native which does admirably in the Heath garden, no matter what the soil may be, and that is the Blackthorn (*Prunus spinosa*), of which the double-flowered variety is a shrub of the utmost loveliness in the early days of spring.

Polygala Chamæbuxus, that comely little shrubby Milkwort of the Alps, is a carpeting subject which may be put to most effective use in Heath plantations. Its dark-green, Box-like leaves are always an acquisition, and these it will adorn with its cheerful, Pea-like flowers throughout the spring and again in autumn. Indeed, there is scarcely a month of the year in which *P. Chamæbuxus* will not be flecked with colour. In the typical plant the blossoms are yellow and white, but in the variety *purpureus* the "wings" are purple and the "keel" yellow. Once established, *P. Chamæbuxus* will thrive with me in the driest of soils and in sun or shade. As a ground covering for the Tree Heaths it is admirable.

Roses may not suggest anything very useful for the purpose under consideration, but there are one or two members of the genus *Rosa* which I should place very high up in my list of shrubs for the Heath garden. There is the Scotch, or Burnet Rose

(*R. spinosissima*), for example, which has several varieties that associate most happily with Heaths. Groups of any of the dwarfer forms of this dainty, fragrant little Rose are always a delight, and all of them will do well in such dry, sandy soils as are frequented by the Tree Heaths, *E. cinerea* and others. In addition, there are several more native wild Roses which may be included, such as the Sweet Briar (*R. rubiginosa*), *R. tomentosa*, *R. villosa*, and *R. arvensis*. These are as indifferent regarding soil as the Burnet Rose, and no one who has ever seen them growing naturally among Heaths will need persuasion as to their fitness for such company.

R. nitida is a pretty little Rose, which I can warmly recommend. Its autumn tints are extremely brilliant, and it has the true wild character which one wants in Roses selected for the present purpose. *R. alpina* is equally good, a very refined and dainty, thornless species, whose soft emerald foliage makes such a pleasing setting for the little crimson flowers and scarlet fruits. *R. sicula*, a hardy, dwarf species from Italy, is suitable for any site or situation where the Burnet Rose, which it somewhat resembles, will prosper, while its ally, *R. ferox*, is equally pretty and neat.

Taller, wild, bush Roses adaptable for the Heath plantation there are in plenty, but there is only one more species which I will refer to here, and that is the trailing *R. Wichuraiana*. This is a quite prostrate Rose, with glossy foliage, and one that bears large panicles of pure white flowers from July onwards. It is an admirable kind for the rougher banks or slopes. No soil seems to be too hot and

dry for it, and it will often make slender, creeping branches twenty feet in length. Let these thread their way between or through clumps of Heaths, and they will throw up, at intervals, their elegant trusses of bloom, thus creating a most beautiful effect throughout the later summer months and well into autumn.

Many other suitable subjects will occur to anyone interested in Heath gardens. I have merely suggested a few, by way of indicating the character of the shrubs which are most likely to give the best results, and, incidentally, to indicate the wide variety of adaptable kinds available.

As to the use of trees, if these are seldom necessary they often greatly enhance wide plantings of Heaths, always provided they are carefully chosen and well placed. Light and graceful trees, like the Silver Birches, for example, may be the making of an extensive stretch of Heaths. The dwarfed Pines are also admirable in every way, especially on rocky eminences, where also many of the Junipers are singularly effective. But caution has to be exercised in all such matters as this, especially with exotic evergreens. Of these the Conifers are undoubtedly the best, but even with them any attempt at "dotting" should not be tolerated in the Heath garden, while anything in the nature of regular or formal planting is equally bad. If a few suitable trees exist naturally, well and good, but in planting such subjects it must be borne in mind that while the tree may have an intrinsic beauty of its own, its main purpose is to give point to the general effect.



CYTISUS KEWENSIS

Gardner

CHAPTER XI

HEATHS IN INDUSTRY AND LEGEND

It has occurred to me that I shall be doing less than my subject deserves if I fail to include in this little book a few brief references to some of the many economic uses to which Heather (to apply the word in a general sense) is, or has been, put. But in practically all of these the difficulty of securing reliable data stands in the way of making such notes as informative and convincing as they might be. Who, for example, can measure the extent of the trade done in "White Heather"? That a great deal of money changes hands every season over this world-wide floral emblem of Good Luck is undoubted. And the fact that people buy and people sell white Heathers, which are anything but the genuine article, and at all seasons of the year, is sufficient testimony to the depth of the popular feeling with regard to that cherished idol of romance. But none can ever guess at the pecuniary value of the business done in this way.

Nor is it easy to secure anything like a fair estimate of the extent of the trade done in Heather as a cut flower for decorative purposes, wreath-making, and such like. In this connection, however, I may venture the remark that there would here seem to be a considerable opening for enterprise. How

seldom, for instance, does one see that beautiful white Heath, *E. mediterranea alba*, or the best white varieties of Scotch Heather, in our markets and flower-shops? The former blooming in spring, and often at Easter, when white flowers are "at a premium," surely promises a profitable opening for business, and one as yet practically untried.

There is this much to be said for Heather as a cut flower: It keeps fresh for a very long period, it may be packed inexpensively without fear of crushing, and it is extremely light in weight. Sprays of the beautiful white Tree Heaths of Southern Europe find their way to the London market, but one is not so much surprised at that as at the fact that they have not come in greater quantity, especially considering how well they travel, and their unquestionable charm. I have gathered sprays of *E. arborea* and *E. lusitanica* in the South of Europe, kept them in a box for over a fortnight, and found them as fresh as when they were gathered. It appears to me, as one who is not without some experience in market flower culture, that all the above-named and other Heaths offer great possibilities to enterprising nurserymen, florists, and others, in many parts of this country.

To those people who dwell in a land where Heaths predominate, as in parts of Scotland and Ireland, these lowly shrubs have always meant much. Necessity may have been the mother of their inventions, and doubtless was. But the Heather which for league upon league surrounds their homes, often to the exclusion of almost all other vegetation, has ever been "a friend indeed." Save for its abundance,

vast territories of northern lands would have been insupportable to human habitation. In olden times those stern and pious folk of the "Land of brown heath" built their cottages almost entirely with it. By laying clumps of Heather with the roots to the outside, and by plastering the bushy portions with earth, or clay, mixed with straw, they constructed the walls of their humble dwellings. For the roof there was nothing available that proved so serviceable as a thatch of Heather strapped together with Willow wands, and this is still extensively used for sheds if not for cottages. Even the beds were made with Heather, and I can testify to the soft and cushiony delights of such a bed which, when properly constructed, should have all the roots of the heather towards the outsides, the more springy, branchy portions meeting down the middle. Heather also served for fuel, as it often does to-day. A large proportion of the best burning peat and turf is composed of it, while the branches are still in many places the only material used in the heating of baking ovens, as they were five hundred years ago.

Heather was largely employed at one time in the manufacture of fencing hurdles, ropes, besoms, and scrubbing-brushes (the word *Calluna* is derived from the Greek, *kalluno*, to cleanse), and it is recorded that not a few Highland lairds once received no small revenue from the sale of these domestic articles. In many parts of France the Besom Heath (*Erica scoparia*) is utilised for the same purpose, and the Tree Heath (*E. arborea*), of the Mediterranean shores, is not only the *bruyère* of

tobacco-pipe fame, but its roots and branches are as often used for fuel as are those of our native species in Scotland, Wales, or Devonshire.

Though the old herbalists generally found "cures" in plenty among wild plants, the Heathers do not appear to have made any notable contribution to their *Materia medica* or our own. It is thought by some that the generic name, *Erica*, which is derived from the Greek verb, *erico*, to break, alluded to some medicinal property which had the power of destroying (or breaking) calculus. But it seems more probable that the word refers to the very brittle nature of the Heath's branches. It is an odd fact that while the older, woody portions of Heather are extremely brittle, the younger twigs are tough and wiry enough to withstand the wear and tear of usage as besoms or scrubbing-brushes.

The Bell Heather, as well as Ling, is, however, possessed of astringent properties of such strength that a solution, "heath-tan," is said to be superior to that of Oak-bark in the tanning of leather. The discovery of this dates from 1776, when the process was deemed of sufficient importance to merit Government recognition. The extraction of a yellow dye from Heather has long been practised in the Western Highlands, and this has been carried out on improved methods during recent years. The shoots and stems are crushed, boiled in alum water, cooled, and filtered. After standing for a few days the liquid assumes a bright golden tint, varying from yellow to orange. Blended with Oak-bark, cochineal, and other preparations, a still wider range of tints

is secured, the dye being used for woollen cloth, yarn, and various other articles.

Whether the inhabitants of the Isle of Islay still brew Heather beer I do not know, but they did so until comparatively recent times. This beverage, however, does not seem to have derived more than its flavour and sparkle from Heather, the more important ingredients being Barley-malt and the narcotic Bog Myrtle. But legend tells of a more potent brew, a beer of such precious vintage that the secret of its manufacture was known only to a single family of Picts, who had jealously guarded their hereditary recipe for many generations.

From the bonny bells of heather
 They brewed a drink long-syne,
 Was sweeter far than honey,
 Was stronger far than wine.
 They brewed it and they drank it,
 And lay in blessed swoond
 For days and days together
 In their dwellings underground.

So wrote Robert Louis Stevenson, and those who would like to know the rest of that romantic story, of how the "Last of the dwarfish men," the Picts of Galloway, died violent deaths because they would not yield up their time-honoured secret to the invading Irish King, may read all about it in the concluding verses of that poem which is entitled "Heather Ale." Sir Herbert Maxwell, in one of his delightful essays—*Memories of the Months, Fourth Series*—also gives us a dramatic account of the tragic incident which terminated in the suicide of the last holder of that long-cherished secret and the

irrecoverable loss of the recipe for brewing Heather ale.

From beer to victuals is a short step, and it is unnecessary to look far to be convinced that Heather is indirectly a source of food supply of no small importance. Peat, as I have said, is often largely composed of humus derived from Heather, and this, under certain conditions, is a fertile soil for the production of various crops. Sheep, and, to a lesser extent, deer, browse upon the tender shoots of Heather, and in Wales at any rate it is believed that Welsh mutton owes its renowned flavour and delicacy to that source.

Grouse, as every one knows, live almost entirely upon Heather tips, and so essential is a regular and abundant supply of young and succulent shoots to the maintenance and well-being of grouse, as well as to the interests of sheep farmers, that a systematic burning of the moors is carried out to that end. Malicious Heather-burning (muirburn), it is significant to add, was once deemed a felony under the laws of England, and severe penalties may still be inflicted upon those responsible for such misdemeanours. In Scotland, where a somewhat similar law prevails, Heather-burning by shepherds and game-preservers is legalised, certain dates being fixed by way of granting to Heather a "close-time," any infringement of which is liable to be followed by heavy fines.

Remembering the enormous amount of revenue derived indirectly from Heather considered only as a food for grouse, to say nothing of the sheep farmer and the crofters' goats, it is not surprising that the

above regulations should be enforced, and that Heather-burning should be carried out, if not on scientific lines, on a systematic and practical basis. "No heather, no grouse," is something more than an aphorism; it is a vital truth of the utmost significance. This is no place to enter into facts concerning the vast revenue which is wholly dependent upon Heather regarded from the point of view of the economic value of grouse, but one or two figures will give the reader some idea of the situation. On the authority of a well-known modern writer, there are some three thousand grouse shootings in Scotland alone, these realising an annual rent of well over three-quarters of a million pounds. But that, of course, only represents a portion of the money involved in these undertakings; at least an equal amount would have to be recorded for the entertainment of the guns, guests, and upkeep of such establishments; and what applies to Scottish moors is hardly less true of immense areas of land in Northern England and Wales. We are accustomed to regard these things merely in terms of grouse, or £ s. d., but it is Heather and Heather alone upon which the whole and far-reaching organisation covered by the phrase "grouse-shooting" is dependent for its very existence.

The connection between Heather and honey is even more intimate in the mind of the general public than that which exists between Heather and grouse. Of the great importance of honey as a food and in medicine I need not write. I am concerned only with the contribution which Heather makes to the annual yield of home-produced honey. But here,

again, I am unable to show by actual figures what this yield amounts to. A year or two ago the Ministry of Agriculture issued notices to bee-keepers requesting them to make returns of all honey produced, but the results of this inquiry are not yet to hand, and even if they were they would be of little help to me, since only a general return was asked for, no particular kind of honey being specified.

Few, however, will question the assertion that the annual yield of honey from Heather in Great Britain as a whole is as large, if not larger, than that from all other flowers put together. No one can have any conception of the enormous bulk of nectar gathered over any given area of moorland between July and October. Hives are carted to the great harvest of the hills, and I have seen colonies of fifty or a hundred of them pitched like so many tents among those purple billows. Every bee-keeper who can "pasture his flocks" amid such plenty knows how rapidly his frames and sections may be filled with the nectar of those countless millions of rosy phials. Wherever there is Heather there is the most copious honey-flow of the year, and although there are no means of measuring its amazing generosity, the proofs of its abundance are manifest to all.

To Scotsmen all the world over Heather honey is the choicest vintage of the bee-keeper's year, and they do not hesitate to distinguish between that of one kind of Heather and another. Writing of honey in that gem of English prose, *The Lore of the Honey-bee*, Mr Tickner Edwards says, "Scotsmen are all



THE BURNET ROSE. ROSA SPINOSISSIMA

of one mind, for a rare chance, in this, and will hear of nothing but the heather, carefully discriminating between the bell-heather, which is good, and the ling heather, which is better." Gerard held a different opinion. "Of these flowers (ling) bees do gather a bad honey," he wrote. But what are an old herbalist's views compared with the unanimous voice of Scotland! As a one-time bee-keeper, and one whose appetite for honey in the comb has never failed him, I must humbly add my acquiescence to the Scotsman's verdict on the matter. The Ling is perhaps a richer bee-plant than the Bell Heather, and it is especially valuable since it blooms so late in the season. But both of them are extraordinarily productive, bee-keepers not only in these islands, but in many parts of the Continent, looking to them to fulfil the highest expectations of their year.

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